MacWEEK

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IN REVIEWS

In Control
To-do list manager

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Back to life at 32-bit

Classic Performer
16-MHz accelerator

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In Apple's absence, other companies, such as new partner IBM and Novell, kept the Macintosh banner aloft at NetWorld 92 in Boston last week. Both companies plan to open their servers up to Mac access.

RICK FRIEDMAN/BLACK STAR

IBM pledges openings to Mac

Apple a no-show at NetWorld 92

By Mitch Ratcliffe

Boston — IBM Corp. promised easier access to its servers for Macintoshes as well as IBM PCs and compatibles at last week's NetWorld 92 here.

However, on the other side of this connectivity equation, Apple did not exhibit. The company had used the previous NetWorld, held in Dallas last October, as a forum to discuss its upcoming Open Collaboration Environment (OCE) (see MacWEEK, Feb. 10).

Mac developers at the show said attendees asked for Macintosh connectivity more than ever before and that Apple's absence hobbled the growing acceptance of Macintoshes in the corporate networking environment.

"Microsoft, IBM and Digital are all here. Apple should be, too, because [NetWorld attendees] want

See NetWorld, Page 112

Seybold to shed light on color

By Carolyn Said and Neil McManus

Boston — The pursuit of predictable color will set the tone at Seybold Seminars 92 here this week, but other publishing issues — such as document interchange, font manipulation and editorial management — also will take the stage.

On both the conference stage and the show floor, the exhibitor and speaker roster reflects Windows' rapid encroachment into graphics and publishing. "Windows is going to start pushing the Mac for graphic-intensive applications," said Jonathan Seybold, publisher of the Seybold Reports in Malibu, Calif.

▸ **Color management.** Some developers and users said they feel that portable color on the Mac is in limbo, waiting for Apple's plan to provide system-level support for color management schemes. "Apple keeps saying, 'It's coming; be happy,' but so far we've seen no specs and no software," said Steve Blank, vice president of marketing at SuperMac Technology in Sunnyvale, Calif.

Meanwhile, however, several developers are forging ahead on ways to guarantee consistent color from input to display to output. Eastman Kodak Co. and Electronics for Imaging Inc. will show off competing color management systems, and line up rosters of developers supporting their schemes.

EFI and Pre-Press Technologies Inc. will show new color editing software, while CYMaK Technologies

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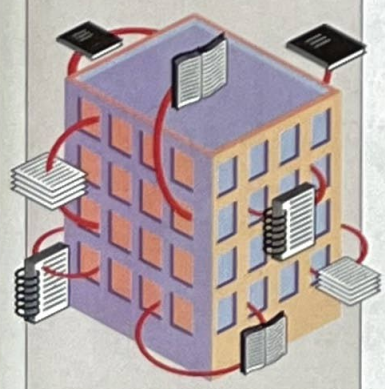
IN-HOUSE PUBLISHING



- DTP for technical documents
- Creating slick marketing tools
- Database publishing

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Apple extending its OS plans

Major system update to bundle extensions

By Andrew Gore

Cupertino, Calif. — Mac buyers concerned over Apple's piecemeal introduction of new operating system extensions can relax. While the company will release several more system extensions as separate products this year, those extensions will be rolled into a major operating system release sometime next year.

According to Charles Oppenheimer, Apple director of Macintosh system software marketing, some of the extensions due in 1992 will be sold through retail channels.

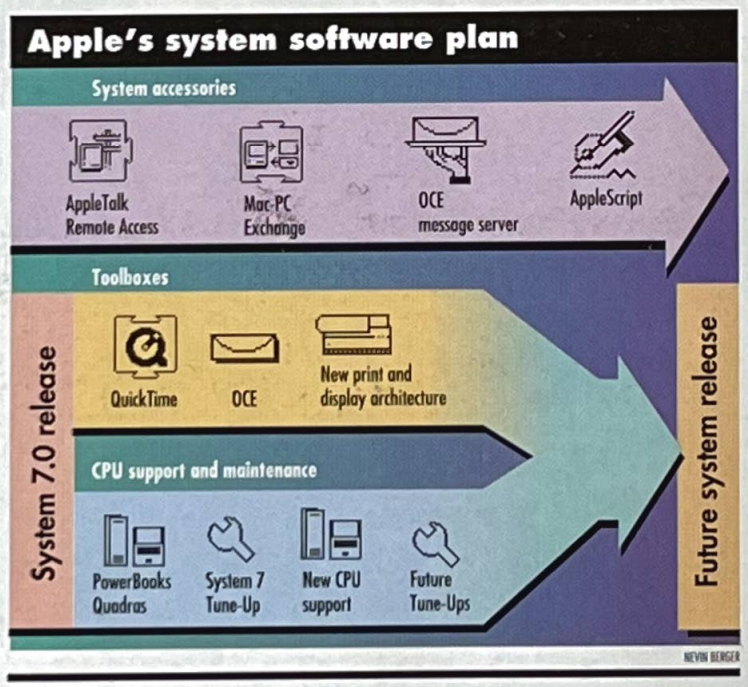
Although Oppenheimer wouldn't comment on specifics, sources said upcoming extensions include an Open Collaboration Environment (OCE) application programming interface, OCE message server, new print and display architecture, Mac-PC Exchange, and AppleScript (see MacWEEK, Feb. 10).

Oppenheimer said Apple also hopes to start shipping drop-in extensions this year that update the OS for new CPUs. This means Apple will have to release at least one more system software update because System 7.0.1 does not currently support CPU update extensions.

System 7.0.1, intended as a CPU update, also included a performance boost that can benefit Macs other than the PowerBooks and Quadras (see MacWEEK, Nov. 5, 1991). Oppenheimer said Apple wants to start shipping bug fixes and system enhancements as separate extensions.

▸ **Unified upgrades.** Extensions will be rolled into major system software releases every 12 to 18 months,

See Retail, Page 112



KEVIN BERGER

Apple expert sets $4 billion claim

By Jon Swartz

San Francisco — Here's the $4.37 billion question: Can Apple collect an unprecedented damages claim from Microsoft Corp. for copyright infringement?

Apple last week produced an expert witness who put the first price tag on the computer industry's most closely watched suit.

The claim, which is based on the expert testimony of Robert Hall, a finance professor at Stanford University in Stanford, Calif., estimates Apple lost more than $3 billion in sales because of competition from Windows 3.0. The study says Apple lost an additional $1.3 billion through Windows applications sales.

However, Apple spokesman

See Lawsuit, Page 110

Adobe forges flexible new fonts

By Bruce Fraser

Adobe Systems Inc.'s Multiple Master font technology is arguably one of the most radical developments ever to hit digital type. Instead of the single typeface contained in previous PostScript outline fonts, a Multiple Master font consists of a set of related typefaces arranged in a matrix; different instances of the font are created by interpolating between the extremes of the matrix. Multiple Master is an extension to the PostScript Type 1 font format, so any software or hardware that supports Type 1 fonts also should support Multiple Masters.

The new format allows type designers to build into the font a maximum of four axes along which the fonts may be interpolated, but the first two offerings, Adobe's MM Myriad and MM Minion, contain two and three axes, respectively, in both the roman and italic faces. Myriad's two axes are weight, running from light to black, and width, going from ultracondensed to ultraexpanded. Both axes have several hundred intermediate steps so Myriad can be used to generate literally thousands of different typefaces.

Minion adds a third axis for optical scaling, a typographic subtlety

See Multiple Master, Page 111

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GRACELAN
UPDATE MANAGER

Claris looking to sell CAD and SmartForms programs

By Andrew Gore

Santa Clara, Calif. — Claris Corp. reportedly wants to offload some of its slower-selling products.

The company reportedly wants to sell Claris CAD, an $899 design and drafting program; SmartForms Designer, which lets users design electronic forms; and SmartForms Assistant, which lets users fill in those forms.

Claris spokesman Steve Ruddock declined to comment on possible sales. He said that "both categories have developed more slowly than the industry expected," but added, "both Claris products are still the No. 1 sellers in those categories."

Analysts said a sale of SmartForms and Claris CAD makes sense. "[Claris has] just too many products; they need to get rid of the smaller programs," said Joan-Carol Brigham, director of research for graphics and Macintosh at International Data Corp. in Framingham, Mass. "As a $90 million company, [Claris] can't afford to support marketing and development for so many products and also finance a new product initiative.

"Claris' future growth as a company is with its cross-platform strategy, with Hollywood and other products they've hinted at," she added.

SmartForms Designer retails for $399, including one copy of SmartForms Assistant; additional copies of Assistant cost $49, or $399 for a 10-user pack. □

Apps get savvy: Event support jumps

By Raines Cohen

San Francisco — The number of applications that can send or receive Apple events has grown to the point where power users can take advantage of this System 7 feature for controlling programs from within other programs. However, there are limits to what programs can do until they support core Apple events, which operate on data within programs.

Most of the programs that support Apple events beyond the four required ones (see chart below) can be told to run a script in their native language. For instance, applications that can send Apple events, such as UserLand Inc.'s Frontier scripting environment, can tell applications such as the Claris Resolve spreadsheet to execute a sequence of instructions to create and format a chart from a set of data. Others use custom events to provide direct control over their interfaces, functions and menus.

Although running program scripts is a step in the right direction, it is also fundamentally limited. Either the user needs to learn a new scripting language for each program to be controlled or the controlling program can activate only pre-made "canned" scripts.

A more robust approach is to implement the core Apple-events suite, which provides a standard way of to access applications' data structures. Developers are slowly adopting the core suite. So far, Deneba Software's Canvas 3.0 is the only application that supports core events. □

Applications start to support Apple events

PRODUCT	VENDOR	EVENTS SUPPORTED
HyperCard 2.1	Claris Corp.	Do Script, Evaluate Expression, stacks can support any event
MicroPhone II 4.0	Software Ventures Corp.	Do Script, Get and Set Data
Canvas 3.0	Deneba Software	Core suite, custom
Resolve	Claris Corp.	Do Script
SuperCard 1.6	Aldus Corp.	Do Script, can send any event, projects can support any event
PageMaker 4.2	Aldus Corp.	Do Script, custom events
QuicKeys 2.1.1	CE Software Inc.	Send any event, Do Script
Frontier	UserLand Software Inc.	Do Script, send any event
StuffIt 3.0 (upcoming)	Aladdin Systems Inc.	Custom events
Control Tower 1.0d99	Simple Software	Send any event, Do Script
Excel 3.0	Microsoft Corp.	Dynamic Data Exchange
Word 5.0	Microsoft Corp.	Dynamic Data Exchange

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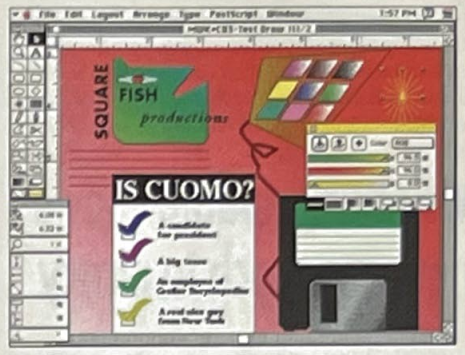

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Radius licenses Mac technology

By Andrew Gore

San Jose, Calif. — Radius Inc. and Apple last week announced that the display maker has licensed Macintosh technology for use in its multiprocessing software, RocketShare.

RocketShare, previously called Saturn V, will allow the Radius Rocket 68040-based accelerator to become a built-in additional Mac. With RocketShare installed, users can break up computing tasks among many Rockets.

In exchange for an undisclosed amount, Radius, based here, bought rights to use "certain parts" of Apple's system software. Both companies refused to reveal which technologies Radius has licensed.

The license will help ensure RocketShare's Mac compatibility as well as save some development time, Radius said. It also will allow RocketShare to mount Rockets residing on other Macs on the network, the company said.

Furthermore, the deal should help protect Radius from possible litigation. RocketShare's original specs called for it to access Mac ROMs, leading to concern that Radius was treading on Apple's copyrights. Radius said it now has license to object code that negates the need to access those ROMs.

"This license wouldn't restrict Apple from suing us if we tried to build a Mac clone, but we have no intent to do so," said Radius President Barry James Folsom.

Radius expects to ship RocketShare, which will come bundled with the Rocket, this summer. Because of the Rocket's relatively low cost — $1,495 not including RAM — Folsom said Rocket users will have "mips to burn."

"What's different today is we have this license with Apple," Folsom said. "It clears any confusion over whether we have Apple's blessing." □

Visionary update shows new approach to piracy

By Dartanyan L. Brown

Portland, Ore. — Visionary Software Inc. adopted a unique approach to simultaneously combat piracy and reduce distribution costs when it recently released Version 2.0 of its time-management utility First Things First.

The company posted on on-line services and distributed through user groups a demonstration version of the program that can be upgraded. After users call the company and supply a credit-card number, Visionary gives them a serial number that makes the program fully functional for just $39.95, a $30 savings over the product's retail price.

Users can freely copy the program and give it to others, but the copies remain in demo mode until a unique serial number is entered. The company will provide special serial numbers for network licenses that allow multiple copies to run on the same network at once.

The First Things First update includes more categories, automatic alphabetization, more printing options and alarms that can sound before an event. Current First Things First users can upgrade for $19.95 and obtain new documentation, or simply download a copy and register it.

Visionary Software Inc. is at P.O. Box 69447, Portland, Ore. 97201. Phone (503) 246-6200 or (800) 877-1832; fax (503) 452-1198. □

Apple steps up fight against software piracy

Cupertino, Calif. — Apple is pushing ahead in its war on piracy, promoting discussion among developers on techniques to prevent unauthorized software copying. In an ongoing discussion on AppleLink, Apple's online service, developers are suggesting techniques, including better-written software licenses and embedding unique serial numbers in every Mac.

The company late last year hosted a brainstorming session with 18 developers to better define Apple's role in the battle.

Even though Apple's unit sales have risen substantially, software sales are lagging behind. Apple said that a major component of the gap is the high rate of software piracy among Mac users, especially in education and in Europe.

Apple has told the Washington, D.C.-based Software Publishers Association, among other industry groups, that it is addressing the piracy problem (see MacWEEK, Sept. 17, 1991). "Studies show customers are generally using six to seven [software] products per CPU, but sales figures are much lower," said Kirk Loevner, director of Apple's developer group. □

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The new LZR 1560 from Dataproducts is a complete departure from ordinary laser printers. At 15 ppm, it's not only faster than most office laser printers, it can also deliver output up to 11" x 17." Which means it can print spreadsheets, illustrations—any two-page layout—in the time it normally takes to process a letter-size page.

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HP to raise LaserJets to Level 2 with new cartridge

By Matthew Rothenberg

Boston — Hewlett-Packard Co. has announced a new Adobe PostScript cartridge that will bring its LaserJet III, IIID and IIIP printers to Level 2.

The HP LaserJet PostScript Cartridge Plus, to debut at this week's Seybold Seminars 92 here, features a software driver that switches automatically between Level 2 and HP PCL 5, the page-description language resident in the LaserJets. Emulation switching also can be controlled manually via the printer's front panel.

The new cartridge supports PostScript Level 2 features including JPEG (Joint Photographic Experts Group) compression and decompression, composite font handling, improved memory management and built-in font rendering, HP said. Many Level 2 features, however, will require the new drivers due in August from Adobe Systems Inc. of Mountain View, Calif. (see MacWEEK, Feb. 10).

The HP LaserJet PostScript Cartridge Plus, which is installed in the printer's font-cartridge slot, also includes 35 Type 1 fonts.

LaserJet III or IIIP users must add at least 1 Mbyte of memory to use the new cartridge, and the LaserJet IIID requires an additional 3 Mbytes of RAM for duplex printing.

The cartridge is due next month for $695, HP said. The new printer comes with a one-year warranty.

The company is preparing a Level 2 upgrade for the LaserJet IIISi, although availability and pricing have not been determined.

HP also said it has cut the price of its Level 1 cartridge (see MacWEEK, Feb. 27, 1990) from $695 to $495. This cartridge remains the line for the LaserJet IID, IIP and IIP plus, HP said.

HP is at 19310 Pruneridge Ave., Cupertino, Calif. 95014. Phone (800) 752-0900. □

Pen-based PIMs coming with Pensoft Perspective

By Jeff Ubois

San Mateo, Calif. — Pensoft Corp. this week is expected to announce Perspective, a personal information manager for pen-based computers running on GO Corp.'s PenPoint operating system. Pensoft said it plans to develop a Mac version of the product when Apple's pen extension, code-named Rosetta, becomes available later this year.

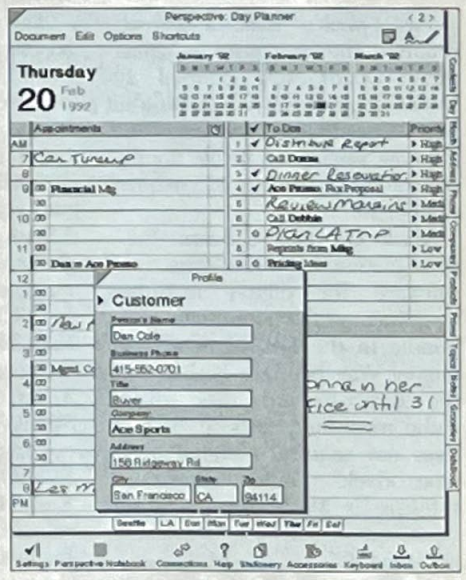
Perspective, slated to ship in the second quarter for $299, is aimed at mobile professionals, especially those in sales and management, according to Pensoft President Michael Baum. It includes a Day Planner, Month Planner, Address Book, Notebook and To Do list.

The product is built around an object database and an organization tool called Associate, which automatically links objects in the database. For example, when an appointment is added to the calendar, a user's profile in the database is updated automatically.

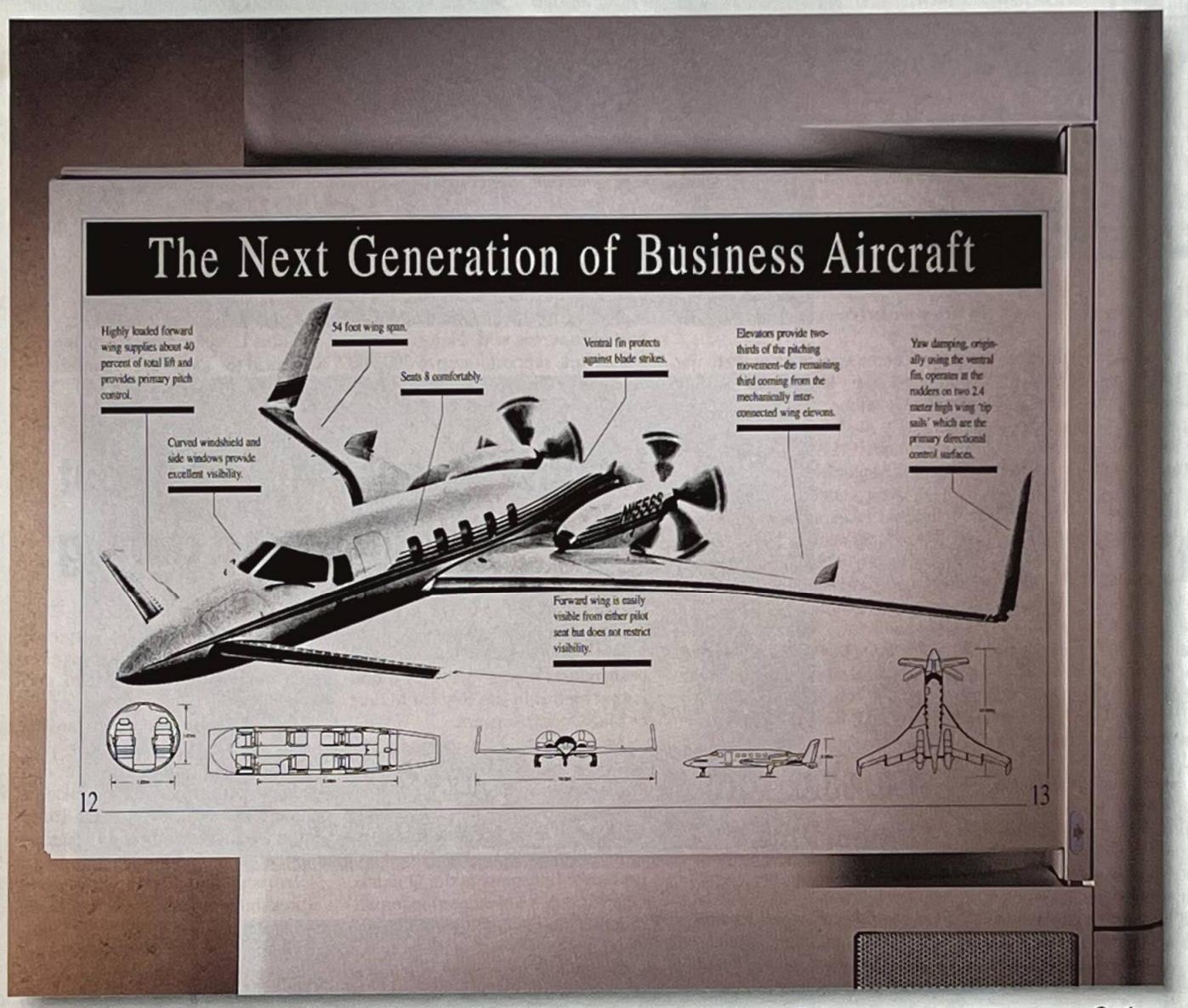
"The PIM is the natural application for pen computing," said Tim Bajarin, president of Creative Strategies Research International, a Santa Clara, Calif.-based consulting firm.

Slate Corp. of Scottsdale, Ariz., is expected to announce its pen-based PIM this week at the Pen Computing 1992 conference in San Jose, Calif., sources said. Slate's PIM will run on both GO's PenPoint and Microsoft Windows for Pen Computing.

Pensoft Corp. is at 1400 Fashion Island Blvd., Suite 1050, San Mateo, Calif. 94404. Phone (415) 358-1575; fax (415) 358-1580. □



Pensoft's Perspective, a pen-based personal information manager that can dynamically link data entered in its five modules, could be one of the first programs to take advantage of Apple's pen extension when it debuts.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11" x 17" Laser Printer Market Snapshot

Manufacturer/Model	Resolution (DPI)	Speed (PPM)	Processor	Page Description Language	List Price
Dataproducts LZR 1560	**300x300 OR 400x400**	**15**	**Weitek 8200 RISC**	**Adobe PostScript Level 2 & PCL4**	**$5,695**
QMS PS2210	300x300	20	Motorola 68020	Adobe PostScript	$9,995
LaserMaster 400XL	400x400	20	None	Microsoft TrueImage	$9,995
Varityper VT600W	600x600	7	Motorola 68020	Adobe PostScript	$16,995
DEC PrintServer 20	300x300	20	N/A	Adobe PostScript	$25,247
ATI LC6020	300x300	20	Motorola 68020	ATI LaserDrive & PostScript	$15,995

Sources: Dataquest and Dataproducts Corporation, 1991

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Sequence analysis more Mac-like

MacVector edits, plots DNA strands

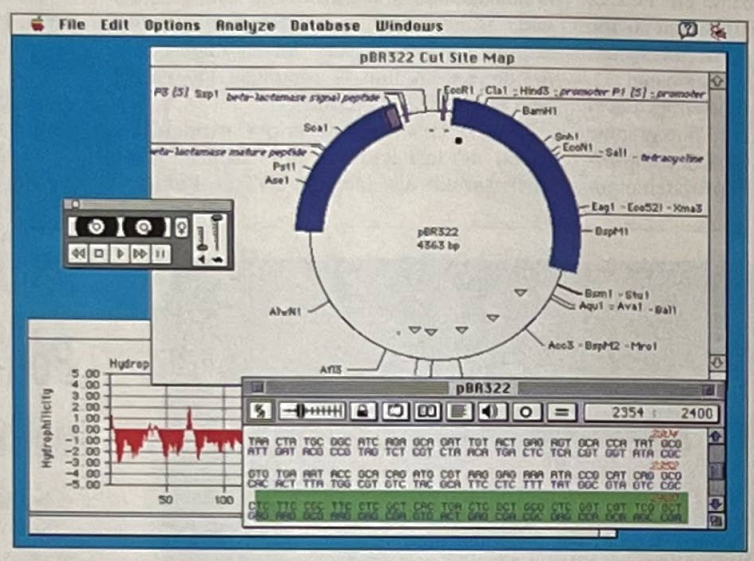
By Raines Cohen

New Haven, Conn. — International Biotechnologies Inc., a wholly owned subsidiary of Eastman Kodak Co., recently shipped MacVector 3.5, an update to its genetic-engineering application for molecular biologists and protein biochemists.

MacVector, first released three years ago, provides access to more than 100 tested DNA and protein analyses. Users can enter DNA sequences using a keyboard, key pad or sonic digitizer. Entries are automatically color-coded by base and can be spoken back to verify them.

Once a DNA sequence is entered, the program can translate it into a protein, and view circular or linear graphic maps. Several built-in analysis techniques help predict and identify coding regions.

All pictures and graphs that MacVector generates can be exported as PICT files for use in other applications. Sequences also can be saved and exported as text for publishing or external analysis.



International Biotechnologies' MacVector lets users edit DNA sequences using standard text-editing techniques, such as copy and paste, and plot them in circular (shown here) or linear form.

MacVector users can easily look up genetic structures in the GenBank Nucleic Acid database on CD-ROM from IntelliGenetics Inc. of Mountain View, Calif.

MacVector can read most major sequence file formats, including GenBank, Stand and GCG (Wisconsin), as well as sequence data stored on DEC VAX hosts and IBM PCs and compatibles.

The latest version of the $2,495 application takes advantage of System 7 features such as balloon help. Upgrades are $125. The company offers a 30-day money-back guarantee on the program.

International Biotechnologies Inc. is at P.O. Box 9558, 25 Science Park, New Haven, Conn. 06535. Phone (203) 786-5600 or (800) 243-2555; fax (203) 624-3143. □

PLI spins up first Mac floptical drive

By Dartanyan L. Brown

Fremont, Calif. — PLI last month began shipping a 21-Mbyte floptical disk drive for the Mac, ending an industry wait for technology first announced in 1988.

The Infinity Floptical 21MB, based on a mechanism from Insite Peripherals Inc. of San Jose, Calif., uses 3.5-inch floptical disks with a 20.8-Mbyte capacity. Floptical disks, made of barium-ferrite magnetic media, are stamped with optical-servo data, packing 1,250 tracks per inch onto a disk rather than the standard 135 tracks (see MacWEEK, March 26, 1991).

The $659 external drive is designed to work with all Macs. A $599 internal model for the Mac Quadra 900 will ship later this month, the company said.

PLI sells floptical disks for $49 each or in 10-packs for $470.

The Infinity Floptical 21MB is backward-compatible with standard Mac 1.44-Mbyte floppies, as well as DOS 720-Kbyte and 1.44-Mbyte disks. It does not read Mac 800-Kbyte floppies.

The drive, which has an average access time of 80 milliseconds for the 21-Mbyte media, drops to 68 milliseconds when used with 1.44-Mbyte media. The sustained data transfer rate for 21-Mbyte media is 200 Kbytes per second, while the rate for a 1.44-Mbyte disk is 150 Kbytes per second.

Both the internal and external units feature push-button controls for SCSI ID selection, as well as solid-state SCSI termination.

Second Wave Inc. of Austin, Texas; Mass Microsystems Inc. of Sunnyvale, Calif.; Procom Technology Inc. of Costa Mesa, Calif.; and Microtech International Inc. of East Haven, Conn., also plan to release floptical drives based on the Insite mechanism within the next three months.

PLI is at 47421 Bayside Parkway, Fremont, Calif. 94538. Phone (510) 657-2211 or (800) 288-8754; fax (510) 683-9713. □

For the Record

Last week's issue incorrectly reported the new price of Quadram's QuadFlextra external 20-Mbyte floppy drives, which were cut $400. The drives, previously $895, are now $495. Compatible floppies still sell for $30 each or $25 in quantities of 10.

Mark Of The Unicorn Inc.'s combination of hardware and software for digital recording was incorrectly identified as a bundle in the Feb. 3 issue. The Digital Waveboard, a NuBus card for direct-to-hard disk digital audio recording, costs $1,495 and does not require a digital audio tape deck. Digital Performer software is $895. Mosaic music-transcription software is available now for $595.

The On Balance summary for the Feb. 3 DeltaGraph Professional review misidentified the maker. DeltaGraph Professional is published by DeltaPoint Inc.

Envisio ships card for PowerBooks

By Raines Cohen

Minneapolis — Want to take your PowerBook-based show on the road? Envisio Inc. last week shipped Notebook Display Adaptor/030, an internal eight-bit-color display card for the Mac PowerBook 140 and 170.

The $795 card, announced last fall (see MacWEEK, Oct. 15, 1991), fits in the memory slot of Apple's 68030-based PowerBooks. It has a pass-through port compatible with Apple's 2-Mbyte RAM expansion card, and it can include 2 Mbytes or 4 Mbytes of additional on-board RAM for $1,195 or $1,595, respectively.

The card supports 13-inch displays in eight-bit color; 15- and 16-inch displays in four-bit color; and 21-inch displays in black and white. The internal PowerBook screen remains active while an external display is in use.

Computer Care Inc., based here, and Lifetime Memory Products Inc. of Huntington Beach, Calif., also have announced internal display adapters for the PowerBooks.

Envisio Inc. is at 510 First Ave. N., Suite 303, Minneapolis, Minn. 55403. Phone (612) 339-1008; fax (612) 339-1369. □

Lotus has word processor, groupware in the pipeline for the Mac this year

Notes client, Ami Pro support SmartIcons

By Daniel Farber

Cambridge, Mass. — Lotus Development Corp. plans to double its quota of Macintosh products this year.

If all goes according to plan, Lotus 1-2-3 for Macintosh and cc:Mail will be joined late this year by Mac versions of Lotus Notes, a workgroup communication application, and Ami Pro, the company's highly regarded word processor.

▸ **Lotus Notes.** A Mac client version for Lotus Notes will ship by year-end, according to sources. Mac client support is part of the Notes 3.0 specification, sources said. Notes 3.0 also will include support for up to 300,000 users and SmartIcons, a set of icons for common commands.

Notes is a client-server-based groupware application that provides mail and shared access to information across multiple operating systems.

Notes for the Mac will require an OS/2 server, but some management capabilities will be available on the Mac client side, sources said.

▸ **Ami Pro.** The Mac version of Ami Pro will resemble its Windows forebear, which competes with Microsoft Word 2.0 and WordPerfect 5.1 for Windows.

Like 1-2-3/Mac, Ami Pro will deliver a Mac-like user interface and compatibility with versions on other platforms. Ami Pro 2.0 for Windows provides SmartIcons, macros, tables, outlining, style sheets, page-layout options, mail merge and support for graphics.

Lotus Development Corp. is at 55 Cambridge Parkway, Cambridge, Mass. 02142. Phone (617) 577-8500; fax (617) 693-3899. □

Impulse Technology brings out the Animals in Quadra caching

By Henry Norr

Cumming, Ga. — Impulse Technology plans to unleash its Animals next month, hoping that they'll find happy homes in the System folders of Mac Quadra owners.

Animals is a control panel designed to address the fact that many current applications are incompatible with copy-back caching, a performance-enhancing technique used by default in the 68040 processor that powers the Quadras. Checking a user-created compatibility table, the software automatically switches on the fly between three modes as the user changes applications: copy-back caching; write-through caching, an alternative approach with which most Mac applications are compatible; or no caching.

Previously available only to owners of Impulse's Performance/040 accelerators, Animals is scheduled for commercial release March 1 at $49.95.

The program's name is derived from the icons it places (optionally) in the menu bar to depict the current state of the CPU: A small green rabbit appears to the left of the Apple when the processor is in copy-back mode; a yellow turtle replaces the rabbit when write-through caching is in effect; and a red snail shows up when all caching is disabled.

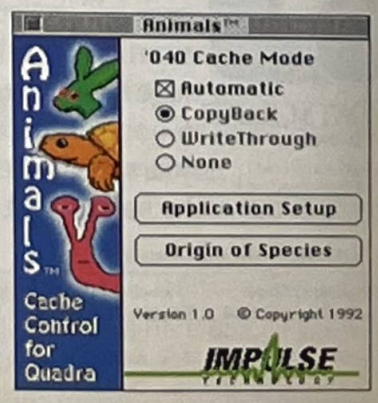
Apple provides a control panel called Cache Switch with the Quadras, but it requires the user to switch modes manually. Other automatic switching utilities include Alysis Software Corp.'s Compatibility and ZiffNet/Mac's free CacheOut. The latter, however, forces LAN users to toggle AppleTalk off and on after each mode switch to maintain network links.

And the Impulse software is unique among Quadra cache programs in supporting write-through caching. According to Impulse, a Quadra is, on average, three times faster with write-through caching enabled than with no caching.

In copy-back mode, the '040 stores information in its on-board cache without writing back to RAM, until the cache is full or until software explicitly flushes the cache. In write-through mode, the approach used in the 68030, any data sent to the cache is also written immediately to RAM.

Site licenses will be available.

Impulse Technology is at 210 Dahlonega St., Suite 205, Cumming, Ga. 30130. Phone (404) 889-8294; fax (404) 781-8738. □



Animals uses a rabbit, a turtle and a snail to depict the state of the 68040's caches.

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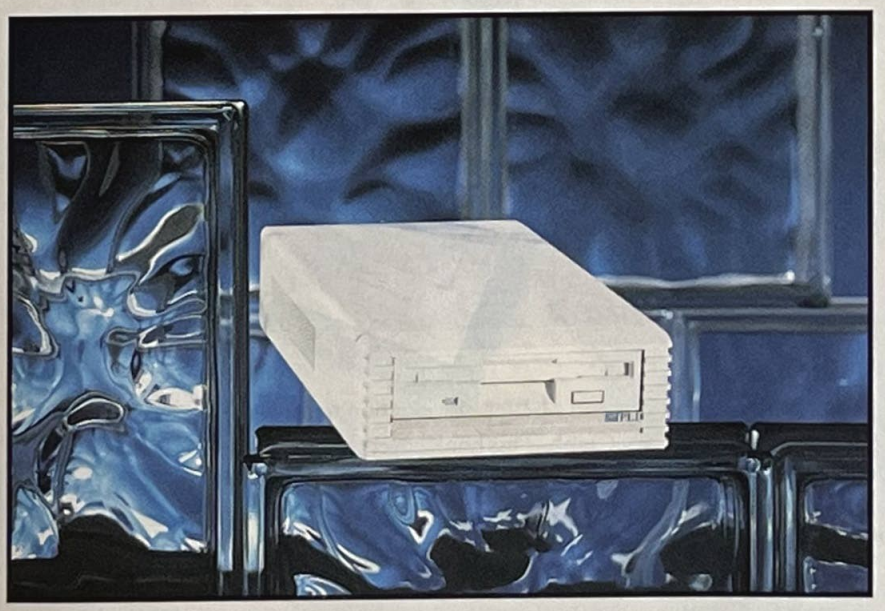

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GW Instruments lets Macs tap sound, data

By Raines Cohen

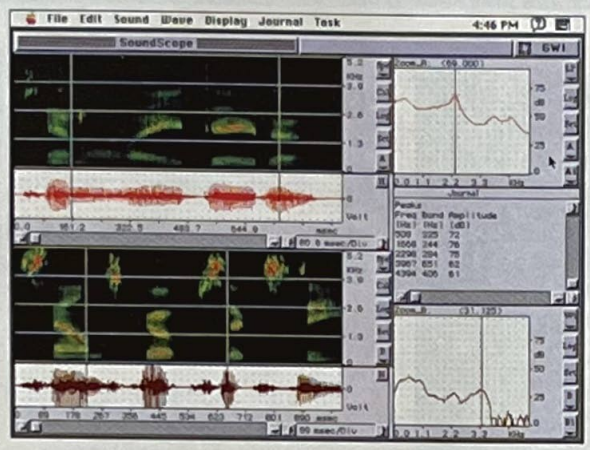
Somerville, Mass. — GW Instruments recently announced several Mac-based data analysis and acquisition products:

▸ **SoundScope** turns Macs into sound-analysis workstations. Users can record, view, analyze, play, store and print sound waveforms.

SoundScope/8, priced at $1,490, includes a MacRecorder eight-bit single-channel digitizer from Macro-Mind-Paracomp Inc. of San Francisco; users of Macs with a built-in microphone can get SoundScope/8 without the digitizer for $150 less.

The professional system, SoundScope/16, priced at $4,990, includes a 16-bit, two-channel, 44-kHz audio digitizing NuBus card with a Motorola 56001 digital signal processor. It also includes two Bose speakers, along with support for customizable menus and a macro programming language.

▸ **SuperScope/488** makes the Mac into a front end for IEEE-488-compatible digital storage oscilloscopes and "black-box" digitizers. Users can control and see data from more than two dozen devices from Tektronix Inc., Hewlett-Packard Co., LeCroy Corp., Nicolet Instrument Corp. and IOtech Inc. It also is compatible with GW's MacADIOS line of digitizer hardware.



GW Instruments' SoundScope makes a Mac into a sound workstation, capable of performing color spectrograms on sampled speech and sound.

The program, available now, comes with a library of analysis features including transcendental, statistical and digital signal processing functions. Results of analyses can be stored and displayed as graphs or tables.

SuperScope sells for $990; the SuperScope 488 Instrumentation Library, required for interface to IEEE-488 digital oscilloscopes, is $290.

▸ **MacADIOS ADPO** is a $695 breakout box that allows connection of external data sources in a 19-inch rackmount industrial cabinet. It connects to the company's MacADIOS digitizer cards with a 34-pin shielded cable.

Two companion desktop units also were announced last month; MacADIOS APO, for $225, supports analog I/O signals, and MacADIOS DPO, for $175, supports TTL and clock signal I/O.

Users can customize the breakout systems to add filters or other specialized circuitry.

GW Instruments is at 35 Medford St., Somerville, Mass. 02143-4211. Phone (617) 625-4096; fax (617) 625-1322. □

Destiny Technology sets sights on speedy screens with new ASIC

Chip rasterizes fonts 50 times faster

By Matthew Rothenberg

Milpitas, Calif. — Destiny Technology Corp. is bringing display systems up to speed with a new lower-cost version of its Raster Image Device Accelerator (RIDA) chip that has been optimized for computer screens.

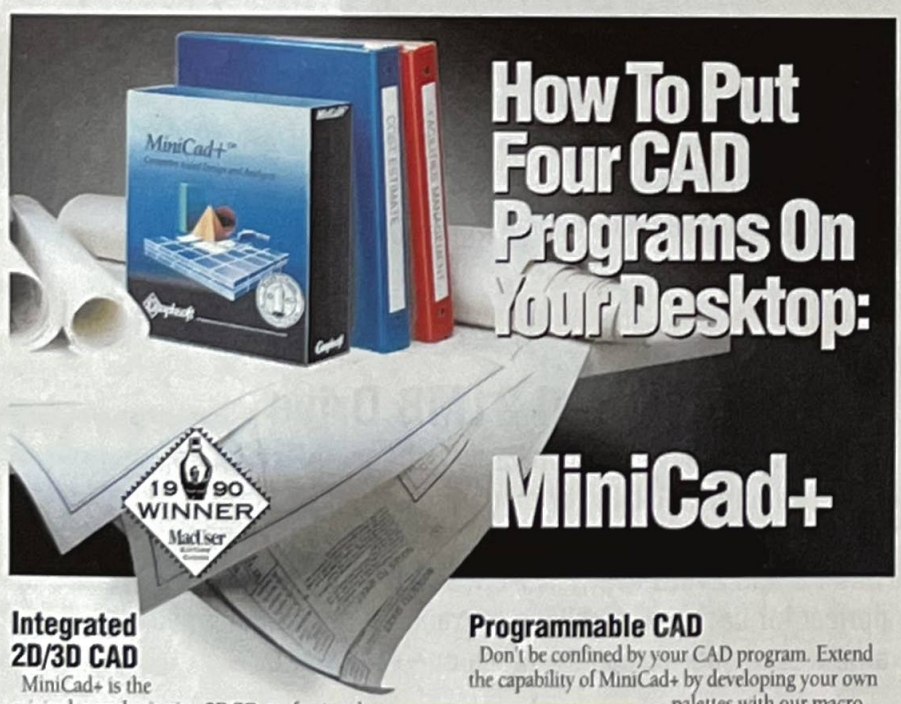
Destiny, based here, will demonstrate the new RIDA/Softcopy D7002 application-specific integrated circuit (ASIC) at this week's Seybold Seminars 92 in Boston. The chip provides graphics-generation capabilities that resemble the font-rendering features of its higher-speed predecessor, the D7001, which was designed specifically for laser printers (see MacWEEK, Sept. 24, 1991).

The new chip accelerates the rasterization of Type 1 and TrueType fonts, as well as QuickDraw graphics, up to 50 times and generates fonts at up to 4,000 characters per second, compared with speeds of 30 to 50 characters per second for a Motorola 68000 processor.

In addition, the D7002 adds anti-aliasing algorithms that generate Bezier curves and smooth typefaces at large sizes. Because the D7002 is aimed at display systems instead of higher-resolution printers, Destiny was able to reduce the circuitry on the chip and lower the cost to OEMs that want to integrate it into their displays, said David Larrimore, vice president of marketing.

According to Destiny, the first implementation of the technology will be a DOS-based display system; the RIDA/Softcopy D7002 also will be used by Mac-based OEMs by the first quarter of next year, the company said.

Destiny also will demonstrate WinStyler, a low-cost, plug-and-play PostScript-compatible hardware and software controller that integrates a new Destiny interpreter. According to the company, the new controller will help its OEMs develop inexpensive laser printers; the first printers to use the new technology will be announced next fall, Destiny said. □



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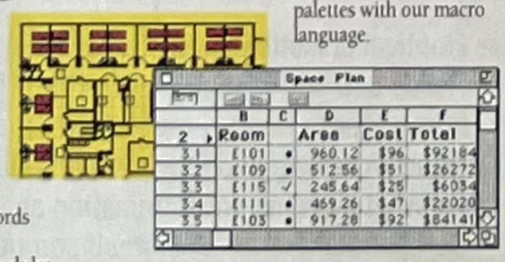

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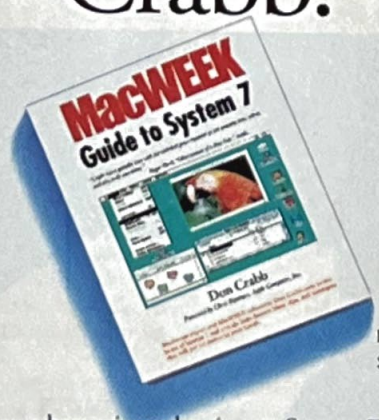

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Casady & Greene offers Cyrillic font libraries

By Henry Norr

Salinas, Calif. — Americans might still find it hard to do business beyond the ruins of the Iron Curtain, but Casady & Greene Inc. is at least making it easier for Mac users to communicate with the people of Eastern Europe and the former Soviet Union.

The company last month released a new library of 30 fonts for Eastern European languages and repackaged its Cyrillic fonts at a 65 percent reduction in price.

▸ **Eastern European Library.** The new library includes script, headline, text and display fonts for 10 languages: Albanian, Croatian, Czech, German, Hungarian, Polish, Romanian, Slovenian and Slovak, as well as English. The package, priced at $200, includes both PostScript Type 1 and TrueType versions of each font.

▸ **Glasnost Cyrillic Library.** Available now at $200, the new 21-font collection combines the nine Cyrillic fonts previously published as the $300 Glasnost Collection with three other volumes that originally retailed for $89.95 each. The set provides Helvetica- and Times-compatible fonts, as well as Garamond, Bodoni, sans serif and script versions.

In addition to the basic character set used in Russia, the fonts include variants used in other Cyrillic languages, such as Ukrainian and Serbian, and several old-Russian characters used in religious literature. Stick-on labels for key caps also are included.

Casady & Greene also offers versions of both packages for IBM PCs and compatibles. The PC packages are now in Type 1 format and include Adobe Type Manager, but the company plans to add TrueType versions after the release of Windows 3.1.

Casady & Greene Inc. is at 22734 Portola Drive, Salinas, Calif. 93908. Phone (408) 484-9228; fax (408) 484-9218. □

Font includes keyboard layout choice

By Raines Cohen

Evergreen, Colo. — Bersearch Information Services released RussianH, a Cyrillic PostScript font that offers a choice of keyboard layouts.

The $75 package includes the downloadable PostScript font, which conforms to the International Standards Organization for Cyrillic text. The font matches the weight, height and style of Helvetica. A set of bit-mapped (screen) faces for the font is included as well.

However, because several conflicting standards specify different keyboard mappings for Cyrillic text (see story below), Bersearch included several alternate keyboard resources that match other companies' settings. An included Fkey lets users switch between preferred keyboards while typing by pressing a key.

The standard keyboard layout is "transliterated," so Cyrillic characters are approximately matched to their roman equivalents. Unlike other companies' keyboard layouts, Bersearch's layouts do not affect Command-key shortcuts.

An included installer script can copy the files and resources into a user's system, so Apple's Font/DA Mover utility is not required.

Bersearch Information Services is at 26160 Edelweiss Circle, Evergreen, Colo. 80439-5522. Phone (303) 674-8875 or (800) 851-0289; fax (303) 674-2860. □

Cyrillic font offerings lack mapping, encoding standards

One of the problems facing users running Cyrillic fonts on the Mac is that there has never been a widely accepted standard for mapping the Russian characters to ASCII values and to keyboard locations.

Some font vendors have imitated Soviet typewriter keyboards; others have used a more mnemonic layout endorsed by a U.S. organization of Slavic-language teachers. Whatever the keyboard layout, there's been no consistency among vendors — and sometimes even among different fonts from the same vendor — in the ASCII values given to the Cyrillic character set.

In addition, each vendor has had to make individual choices about how to deal with special characters such as those used in pre-revolutionary texts and in Ukrainian and other non-Russian Slavic languages.

In all, counting both Mac and IBM PC and compatible Cyrillic-font vendors, at least 30 different encoding schemes are in use, according to David V. Moffat, president of The Russian Works, formerly glps products, a Chapel Hill, N.C., developer of Cyrillic fonts and related utilities.

The absence of a standard can mean chaos when a user switches among Cyrillic fonts from different vendors or sends a document in electronic form to a colleague with different fonts installed: A text that made sense in one font might be gibberish in another.

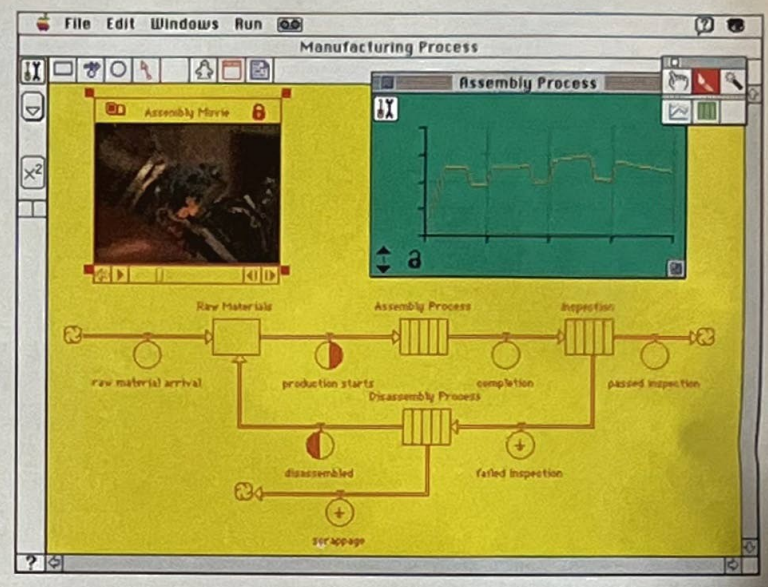
With the development of the new Russian-language version of the Mac operating system, which is available on Apple's recent developer CD-ROMs, the company has finally set a de facto standard. It uses the Soviet typewriter layout and maps Cyrillic characters to the upper half of the 256-character ASCII spectrum, while standard Latin letters get the first 128 slots.

That solution may work well for business users, but it poses a problem for Western linguists, educators and students, as well as for Soviet publishers of dictionaries and textbooks for Western audiences: The Apple standard leaves no room for the special characters not normally used by Russians but needed by Western students, such as stress marks and phonetic symbols used in transliteration. And although it includes Ukrainian, Byelorussian, Serbian and other non-Russian Cyrillic characters, the Apple set does not incorporate old-Russian and old-Ukrainian characters.

To address the problem, The Russian Works has proposed a complementary standard it calls Extended Apple Cyrillic, or EAC. Under this scheme 13 seldom-used symbols that remain in the upper half of the ASCII set under the Apple standard, such as £, ¢, ∞, ¬, ∂, ≤ and ≥, would be replaced by historical and phonetic characters and overstrike stress marks.

The Glasnost Cyrillic Library just released by Casady & Greene Inc. (see story above) does not use the EAC standard. But at least two other font vendors, Linguist's Software Inc. of Edmonds, Wash., and Graphic Arts Technology of Belmont, Mass., have joined The Russian Works in developing EAC versions of their Cyrillic fonts. Bersearch Information Services does not yet use EAC in RussianH (see story above), but the company said it is "prepared to support significant new standards through an inexpensive upgrade program."

Adobe Systems Inc. of Mountain View, Calif., is developing a PostScript Type 1 Cyrillic font that conforms to the Apple standard. But Adobe also intends to include PostScript versions of the EAC characters in its package. No ASCII values will be assigned to those characters, so they won't be accessible from the keyboard when the fonts are first loaded. But the Adobe product, which is due later this year, will include instructions for assigning ASCII values to the unencoded symbols with FontMonger, a font utility from Ares Software Corp. of Foster City, Calif. — *By Henry Norr*



With ithink 2.2, users can create simulations of how a process will work, and then view them as QuickTime movies, as well as play externally created movies such as the one shown here.

ithink Version 2.2 will support QuickTime, publish and subscribe

By Carolyn Said

Hanover, N.H. — Users of ithink, a "visual thinking" product, soon will be able to bring simulations to life with QuickTime movies.

High Performance Systems Inc. announced that ithink 2.2., due in late March, will be System 7-savvy, with support for QuickTime and publish and subscribe.

Targeted at strategic planning, business re-engineering, financial analysis and organizational design, the program lets users construct a "map" of how a process works; it then automatically generates equations to simulate the process. With Version 2.2, users can create QuickTime movies from simulations of process dynamics, as well as view the simulations as animations, graphs or tables.

Other new features include a simplified user interface, floating color and run menus, resizable graph pads, and enhanced tabular output capabilities.

The program remains priced at $695. Upgrades are $25.

High Performance Systems Inc. is at 45 Lyme Road, Suite 300, Hanover, N.H. 03755. Phone (603) 643-9636; fax (603) 643-9502. □

Connections PIM gets module for real-estate, in/out board

By Dartanyan L. Brown

San Mateo, Calif. — Concentrix Technology Inc. this month announced two more plug-in modules designed to work with Connections, its modular stack-based personal information manager.

The new modules are:

▸ **Real Estate Connections.** Developed by RealData Inc., the $395 module helps real-estate professionals keep track of information on properties, sales leads and potential listings.

Connections' built-in reporting, printing, telephone-management and scheduling features allow Real Estate Connections users to manage client appointments and correspondence.

The program also manages mortgage information, allowing the user to pre-qualify prospects for loans.

▸ **In/Out Board.** This module will let users track the whereabouts of other Connections users on the network.

The module uses text and graphic views to indicate which workgroup members are in or out of the office. It requires a file server, such as AppleShare, System 7's file sharing or Sitka Corp.'s TOPS.

In/Out Board will ship this quarter from Heizer Software in multi-user packs at a price not yet set.

Connections, priced at $199, integrates personal and group calendaring, a customizable telephone directory and a notes module into a single package (see MacWEEK, Sept. 24, 1991).

Concentrix Technology Inc. is at 1875 S. Grant St., Suite 760, San Mateo, Calif. 94402. Phone (415) 358-8600; fax (415) 358-9742.

RealData Inc. is at 78 N. Main St., South Norwalk, Conn. 06854. Phone (203) 857-4310 or (800) 899-6060; fax (203) 852-9083.

Heizer Software is at P.O. Box 232019, Pleasant Hill, Calif. 94523. Phone (510) 943-7667 or (800) 888-7667; fax (510) 943-6882. □

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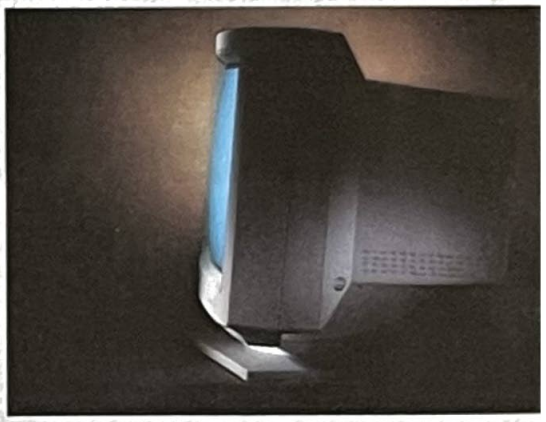

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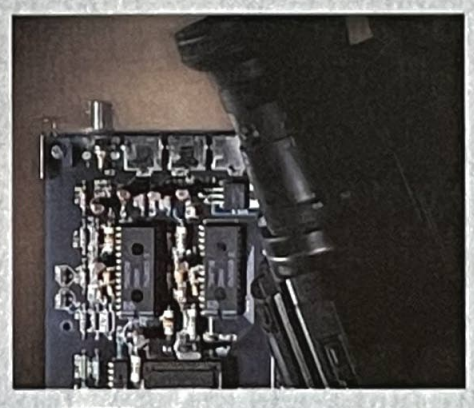

QuickImage 24 full color video capture card lets you capture images for desktop publishing or produce QuickTime™ movies.

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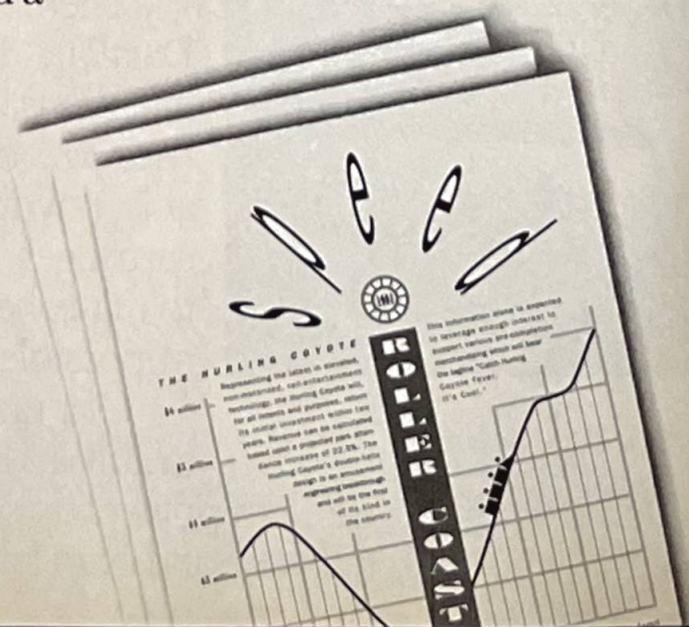
Some things are clearly built for speed.

Hang on! At 17 pages per minute, the new HP LaserJet IIISi printer for the Macintosh runs full tilt. With a high-speed engine, more standard memory (5MB, expandable up to 17MB), and a RISC-based formatter, this printer can have your work finished faster than you can shout "the HP LaserJet IIISi for the Macintosh."

Designed specifically for high-volume printing, this machine comes with two 500-sheet input trays, a 500-sheet output capacity, and a 50,000-page-per-month duty cycle. In addition to quick turnarounds, you gain paper-handling versatility with job offset and a tray-full sensor. And for even greater flexibility, you have the option of adding two-sided printing and an envelope feeder.

What's more, our printer has true Adobe® PostScript® built in. Which means this machine whips through PostScript printing, while others may keep you waiting. So whether



Others aren't so obvious. Introducing the LaserJet IIISi for the Macintosh.

Works with LocalTalk and EtherTalk.

your workgroups are networked by LocalTalk, EtherTalk, or sharing files between both, simply plug in and they're ready to roll.

Perhaps the best news of all is the price. The HP LaserJet IIISi for the Macintosh is only $6,995.* So if you're interested in affordable, express printing with the service and reliability you've come to expect from Hewlett-Packard, call **1-800-752-0900, Ext. 2607** for the name of your nearest authorized HP dealer.† And discover the printer that will take your breath away.

LaserJet Printers

HEWLETT PACKARD

*Suggested U.S. list price. Adobe and PostScript are registered trademarks of Adobe Systems, Inc. in the United States and other countries. †In Canada call **1-800-387-3867, Ext. 2607** © 1991 Hewlett-Packard Company PE12122

D&B SIC code system speeds searching on MarketPlace CD

By April Streeter

Waltham, Mass. — MarketPlace Information Corp. has added a new coding system to streamline searches of the 7 million businesses listed on its MarketPlace Business CD-ROM.

The company is offering a free update that adds Dun & Bradstreet Corp.'s proprietary Standard Industrial Classification codes to the name, address and phone-number data, which was compiled by Dun & Bradstreet.

The SIC feature classifies types of businesses by eight digits instead of the standard four-digit code used in marketing, allowing users to target more precisely their searches. For example, with an eight-digit SIC, a user could narrow searches of grocery stores to target only independently owned convenience markets.

"We just plug in the SIC code and pick a state," said William Yee, planning manager for Octel Communications Corp. of Milpitas, Calif. Yee uses the program to find new markets for his company's voice-mail service. "The bottom line for us is, this is a whole lot cheaper than doing an on-line search," he said.

New users pay $995 for the MarketPlace Business CD-ROM, a year's subscription of quarterly updates to the data, and the right to download and use 3,000 names. Additional names are about 10 cents each, depending on volume.

MarketPlace Information Corp. is at 3 University Office Park, Waltham, Mass. 02154. Phone (617) 894-4100; fax (617) 894-1656. □

New QPID release works on Quadras

By Shawn Tomlinson

Toronto — GT Omnicom Inc. has released a minor update to its QPID visually oriented office-management database.

The new version, priced at $695, shipped last month.

The new release works on the Mac Quadra series. It now can store item pictures and can calculate the discount from retail price. Unlike previous versions, the update does not require Apple's ResEdit utility to move lists between the old and new versions.

In addition, users now can access all items for a particular client with the click of a button, and they can sort items in the resource picker.

"We have a giant client database — about 30,000 civil engineers," said Jon Rosen, president of Multi-Media Modeling, a Hawthorne, Calif., marketing company. "We use QPID to control all invoices, client records and any activity."

Rosen said he most likes QPID's quick-report function, which allows him to generate daily call lists based on his clients' needs.

Upgrades to the new 1.4.16 version are $10 plus shipping costs.

GT Omnicom Inc. is at 481 Queen St. E., Toronto, Ontario M5A 1T9, Canada. Phone (416) 365-1436; fax (416) 369-9166. □

Sebastian updates Image Grabber

By Henry Norr

Bellevue, Wash. — Sabastian Software last month released a new version of Image Grabber, its screen-capture desk accessory.

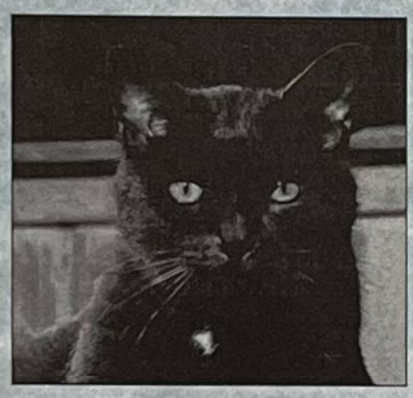
Version 3.0 of the $49 DA adds System 7 compatibility and several new features, including scaling and saving to multiple Scrapbook files. The program's Timed Grab feature, which makes it possible to save a screen after a specified number of seconds, now lets users choose the area to be captured. In addition to the full screen, options now include the active window and an area defined by the user in terms of pixel coordinates.

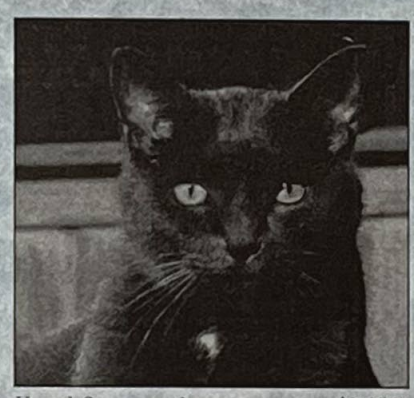
Other features include support for up to 32-bit color on any size monitor, an option to force an image to black and white, and selection of the destination folder via standard Save As dialog boxes.

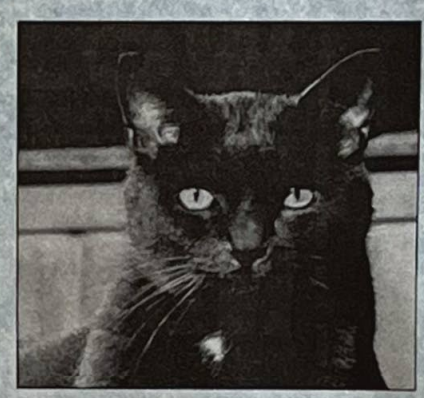
Upgrades are $15 plus $3 shipping ($5 outside the United States), or free — except shipping charges — to customers who provide a copy of an invoice showing that they purchased Version 2.0 after Oct. 1, 1991.

Sabastian Software is at P.O. Box 70278, Bellevue, Wash. 98007. Phone (206) 861-0602. □

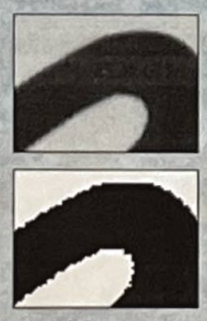
We're proud


Microtek 600ZS $2,195*

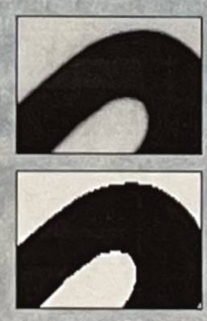

Howtek Scanmaster 3 $8195**

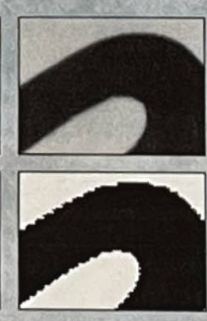

La Cie Silverscanner $1,399

Microtek 600ZS 300 dpi at 1600%


Howtek Scanmaster 3 300 dpi at 1600%

La Cie Silverscanner 300 dpi at 1600%


Microtek 600ZS 600 dpi at 800%


Howtek Scanmaster 3 400 dpi at 1200%

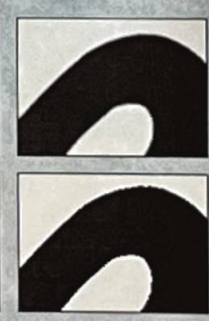

La Cie Silverscanner 600 dpi at800%

Image is everything.

We believe quality is a priority. Our image as a company that produces quality products is well known. We're so confident in the quality of our scanner image that we are willing to compare it to other scanners right here. Compare for yourself.

Great color the first time.

Just look at the difference in the color scans. The single-pass Silverscanner has three separate noble gas-filled lamps for red, blue and green that are balanced so you get great scans the first time. With Silverscanner's built-in gamma correction, you get clean, bright scans with excellent detail in those hard-to-get areas that don't require difficult adjustment like other scanners. This can mean substantial time savings when every second counts.

The shadow knows.

Do you want good shadow detail? Then compare the black and white scans. The Silverscanner can give you production quality gray-scale scans for magazines, newspapers and brochures.

Lay it on the line.

When comparing line art, the Silverscanner really shines! At 1200 dpi you get what amounts to an ***electronic stat***. The comparison is incomplete, however, because some scanners don't have hi-res capability (too bad). But even if you compare at 400 or 600 dpi, it's clear how much better the Silverscanner is, especially bundled with Color It!

La Cie Silverscanner with Color It
$1399

Price does not include shipping. Add 5% surcharge for American Express. Add sales tax where applicable. La Cie is a trademark of La Cie, Ltd., a Quantum Company. All other trademarks are the property of their respective companies. *Price advertised in Macworld, Sept. 91. **From Howtek price list, effective 3-1-91. All specifications, terms, descriptions, products and services herein are subject to change without notice or recourse. Bundles in U.S.A. only.
Ad design and production by Graphic Witness. Subject photos by Dennis Carney. © Copyright 1991 La Cie, Ltd., 19552 SW 90th Court, Tualatin, OR 97062. Phone: (503) 691-0771, Fax: (503) 691-5590). All rights reserved. Printed in U.S.A.

Mac Software Registry released

By Shawn Tomlinson

Bronxville, N.Y. — Looking for an obscure piece of Mac software? A new electronic directory from the Mac Software Registry, publisher of The Mac Software Monitor newsletter, lists more than 5,250 Mac software products and 2,100 vendors.

The Mac Software Registry Database, based on FileMaker Pro, includes information on retail prices, upgrades, System 7 compatibility and known anomalies or bugs. Users can search for software by categories, such as business, education or music.

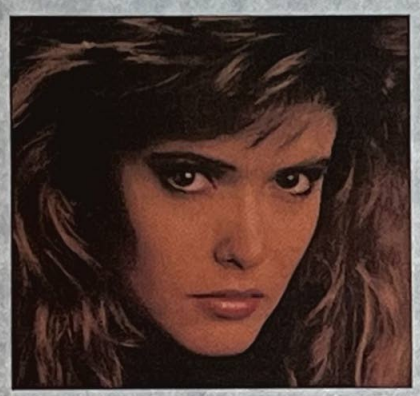
The database also lists toll-free, direct, technical support and fax numbers; and mailing and electronic-mail addresses for software publishers and distributors.

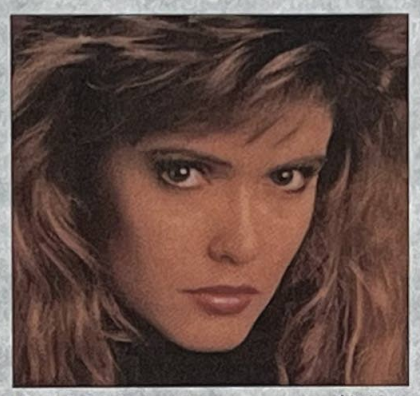
The registry's $179 price tag includes the database and three quarterly updates. Users can renew their subscription for $99 a year. Volume discounts are available.

For an extra $29, users can buy a separate database of just the vendor information and a read-only version of Casady & Greene Inc.'s desk accessory database QuickDex II.

Mac Software Registry is at Box 925, Bronxville, N.Y. 10708-0925. Phone (914) 961-8743 or (800) 873-2833; fax (914) 793-3739. □

of our image.


Microtek 600ZS $2,195*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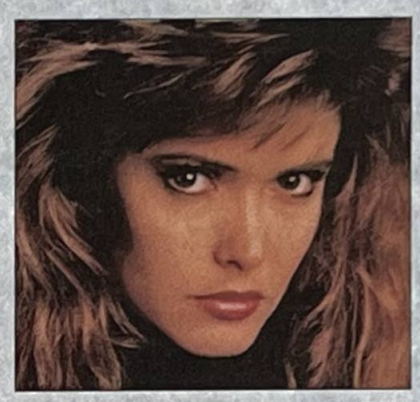
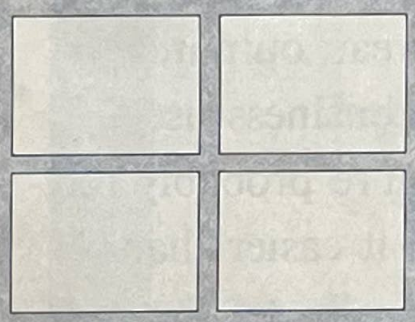

La Cie Silverscanner $1,399

All scans were done at default settings with no corrections. The color images were separated using Adobe Photoshop. The logo was scanned as grayscale and as line art. This entire ad was done on the Macintosh using Silverscanner, Photoshop, Quark XPress and a PostScript Imagesetter. The entire production cost was $145.


Microtek 600ZS
1200 dpi at 400%—n/a

Howtek Scanmaster 3
1200 dpi at 400%—n/a

La Cie Silverscanner
1200 dpi at 400%

La Cie Silverscanner
1200 dpi at 100%

Software to die for!

We're proud of our image when it comes to quality software, too. La Cie has always had a reputation for powerful, well-written software. La Cie's exclusive plug-in modules for Photoshop, ColorStudio, Digital Darkroom, Enhance, ImageStudio and RagTime have been hailed as some of the best software ever written for flat-bed scanners. Enjoy features like fast dynamic ***color*** previews, independent color/brightness controls, nine scan modes, savable scan settings, color dropout, magnified previews, proof scans, 25% to 400% scaling in 1% steps, and 25 dpi to 1200 dpi in 1 dpi steps.

Silverscanner is OCR and Apple System 7 compatable and can be purchased with full versions of Adobe Photoshop ***and*** Letraset's ColorStudio— a $2139 value for only $1899!

La Cie Silverscanner with Photoshop and ColorStudio
$1899

Who ya gonna call?

La Cie offers you toll-free expert technical support. We know scanning inside and out. We can help you. And we'll be here for you tomorrow because La Cie is a Quantum Company.

Seeing is believing.

La Cie is so proud of the Silverscanner, we used it to produce this ad. Not just the comparisons, ***everything.*** Call and order yours today.

"The choice is clear . . . buy the La Cie Silverscanner."
Macworld, June 1991

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To order or for more information, call toll-free
800-999-0143
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International 503-691-0771 Fax 503-691-5590

News BRIEFS

MacInTax for '91 finalized

San Diego — ChipSoft Inc. announced final versions of its personal tax-preparation software for the 1991 tax year. The new MacInTax, priced at $99.95, offers a five-minute "quick tour" for inexperienced users.

The program also features an "interview" section that asks questions to help the user choose tax forms and a "logical next step" feature that moves the user through the tax-preparation process.

Users of previous years' MacInTax can upgrade for $49.95. Windows and DOS versions of the program are available.

ChipSoft Inc. is at 6330 Nancy Ridge Drive, Suite 103, San Diego, Calif. 92121. Phone (619) 453-8722; fax (800) 755-1040.

Xplain to publish MacTutor journal

Los Angeles — Xplain Corp. has acquired the longtime Mac programming journal MacTutor, which had not been published the past two months. The developers magazine, which has been published by Anaheim, Calif.-based MacTutor Co. since its inception seven years ago, will resume publication in April.

Xplain said it purchased MacTutor after the magazine experienced financial difficulties making it unable to publish the January or February issues.

All advertisers and subscribers will receive automatic extensions, the company said.

Xplain Corp. is at P.O. Box 250055, Los Angeles, Calif. 90025. Phone (310) 575-4343; fax (310) 575-0925.

Contact Ease gets faster searching

Spring Valley, Calif. — WestWare Inc. last month shipped Version 1.3 of Contact Ease, its multifunction contact manager.

The $395 application, which keeps business contact lists for up to five users, now includes better list management and faster searching.

Users can perform three-level Boolean searches and search check box-style fields. All the records found in a search now can be seen at once, rather than individually. Contact Ease users can upgrade to Version 1.3 for $40.

WestWare Inc. is at 10148 Diamond Head Court, Spring Valley, Calif. 91977-5317. Phone (619) 660-0358 or (800) 869-0871; fax (619) 660-0233.

The first monitor for people who know which red is the right red.

*NEC, who brought **you the first color laptop** computer and affordable color printers, now brings you the **only** color monitors with the AccuColor Control System, an unprecedented step in user-adjustable color accuracy.*

You can match the red on your letterhead, the red on a slide, even the red on your favorite tie. And you can do it easily.

With NEC's new MultiSync® FG™ series monitors.* Our revolutionary AccuColor™ Control System allows you to adjust image colors to your exact needs.

This new color calibration system lets you match colors on your screen to Pantone® or any other color reference system. You can also match on-screen colors to those delivered by your color printer, another monitor, or a service bureau output.

Whether your monitor needs are for general business use, multi-media applications, or color prepress, you're probably relying on color more than ever. And we've made it easier than ever to match the color you need. You can actually set the red, green, and blue color guns in precise digital steps to adjust the colors on the display.

The FG series also gives you sharper graphics and text. So even if you're not one of those people who knows which red is the right red (top row, fourth column), the answer to your monitor needs couldn't be clearer.

Call 1-800-NEC-INFO. (In Canada: 1-800-343-4418.) For immediate info via fax, call NEC FAST FACTS, 1-800-366-0476. Request #1521.

C&C
Computers and Communications

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MultiSync 4FG

Because ⬆ is the way you want to go.

NEC

Gateways

- Networking
- Communications

Pacer server lets Macs query Suns

Unix DAL server opens SQL databases

By Mitch Ratcliffe

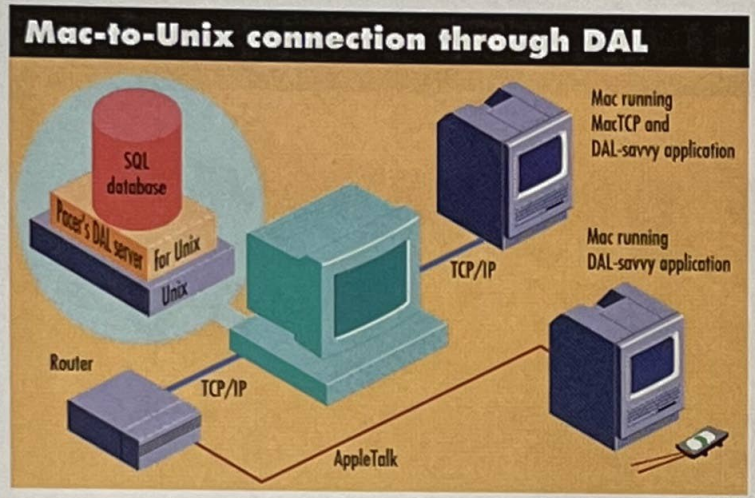
La Jolla, Calif. — Users will be able to get a handle on Unix SQL databases with a DAL server from Pacer Software Inc.

Available now for Sun Microsystems Inc. SPARC-based workstations, Pacer's DAL Server for Unix will let any application that is compatible with Apple's Data Access Language (DAL) make queries to relational databases running on a Sun server. Pacer said it will ship a DAL Server for Hewlett-Packard Co.'s 9000/800 systems in March.

DAL applications that can access Unix databases through Pacer's server include ACIUS Inc.'s $500 4D DAL, which can be used to build a front end to SQL databases, and Fairfield Software Inc.'s ClearAccess 1.3, a "data dipper" application.

Pacer said its server delivers access to 85 percent of SQL databases used in the Unix world, including those from ASK Computer Systems Inc., Informix Software Inc., Sybase Corp. and Oracle Corp. The Pacer software runs on the Unix server, to which Macs are connected via TCP/IP. Such a connection can be made through Apple's MacTCP extension or a TCP/IP router.

Mac-to-Unix connection through DAL



KEVIN BERGER

"Pacer's DAL Server, as opposed to previous DAL implementations, opens the door to the most price-competitive boxes in the industry," said Brian Walsh, manager of system architecture and technology group at Garden City, N.Y.-based Avis Rent A Car System Inc. Walsh said a Sun workstation gives him more processor and storage capacity at a lower price than mainframes.

But he said DAL has inherent limitations that users should recognize. "There are SQL Level 2 features I want to get my hands on that aren't available through DAL," Walsh said.

Pacer's DAL server for Unix is priced from $4,000 for 16 users to $12,000 for unlimited use.

Pacer Software Inc. is at 1900 W. Park Drive, Suite 280, Westborough, Mass. 01581. Phone (508) 898-3300; fax (508) 388-1356. □

Macs act as Uniscopes with AMIE

By April Streeter

Fairfax, Va. — An upgrade to Air Land Systems Corp.'s terminal-emulation software will put color graphics generated by Unisys Corp. hosts on Mac desktops.

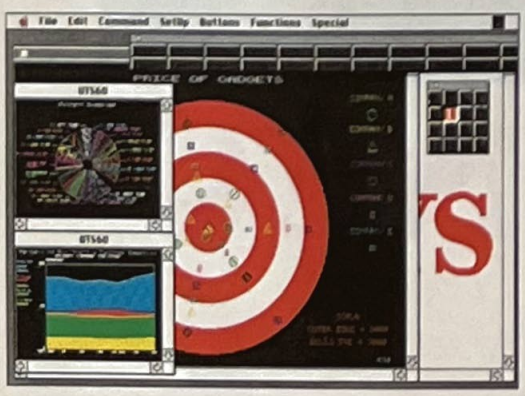
Available now, Apple Macintosh Interface Emulator (AMIE) Uniscope 1.5 will let Macs stand in for Uniscope terminals on OS 1100, 2200 and S80 networks. A 32-user AMIE license is $5,995; a single-user version costs $395.

Version 1.5 provides support for color graphics. It maps UTS-60 graphics imported from the host to Macintosh PICT format, which allows users to cut and paste images to Mac applications.

Other enhancements include:

- **Toolbox.** Included with the software is a toolbox that lets developers write extra tools for the program, as well as an application programming interface for writing stand-alone applications that take advantage of Unisys host capabilities.
- **Macros.** A macro recorder and editor lets AMIE users save Unisys host command-line entries for routine querying of the host.
- **31 flavors.** According to Air Land, the program now supports up to 31 terminal windows running simultaneously.

Air Land has unbundled the AMIE terminal-emulation software from its $1,395 AMIE II NuBus card for the Mac. The cards ship with AMIE Gate, an AppleTalk-to-Unisys gateway application, which is priced according to the number of users who use the gateway.



AMIE Uniscope 1.5 from Air Land Systems emulates multiple Unisys Uniscope terminals, which can include UTS-60 color graphics.

Air Land Systems Corp. is at 2710 Prosperity Ave., Fairfax, Va. Phone (703) 573-1100; fax (703) 573-0121. □

Oracle, Sharp offer PalmLink

By Mitch Ratcliffe

Boston — Oracle Corp. and Sharp Electronics Corp. last week announced a first step Mac users can take toward making large databases more portable.

At NetWorld 92 here, the companies introduced PalmLink, a $299 application programming interface (API) that allows information in an Oracle database to be exported to Sharp's Wizard palmtop computer.

The PalmLink API, due this fall, must be added to applications created with Oracle Card for Macintosh or Windows, a $299 HyperCard-like front-end application for Oracle databases. Users also will need Sharp's $149.95 Link to provide the physical connection to the Wizard.

During the show Oracle also announced PostCard, an API for

See Oracle, Page 20

Client-only QuickMail due in '92 for Novell MHS E-mail engine

By Nathalie Welch

West Des Moines, Iowa — Users with Macs attached to networks based on Novell Inc.'s NetWare will soon be able to access Novell's Message Handling Service engine via the familiar interface of CE Software Inc.'s QuickMail.

This month CE announced that it expects to ship a client-only QuickMail for MHS before the end of 1992. Pricing for the program, which will be available for IBM PCs and compatibles running DOS and Windows as well as for Macs, is not decided but will be comparable to current QuickMail prices, the company said. QuickMail currently costs $599 for a server and 10-user package.

QuickMail for MHS will give Mac users access to the more than 120 applications built on Novell's mail engine, according to CE. It also will allow easy interchange of messages between QuickMail clients and users of Da Vinci Systems Corp.'s popular PC-based Da Vinci eMail.

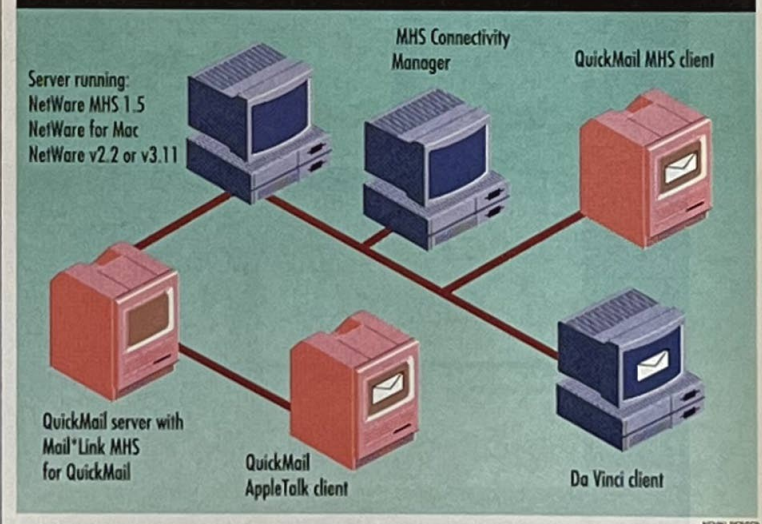
"Our current strategy is to keep QuickMail as both a self-sufficient, all-in-one-box E-mail solution and as a client, with the same look and feel, that can ride on open standards such as MHS," said Richard Skeie, CE president and CEO.

CE's MHS client will require a server running NetWare v2.2 or v3.11, NetWare for Macintosh, and NetWare MHS 1.5. A dedicated PC running MHS' Connectivity Manager also is required if multiple MHS servers are present on the network or if users want to install a gateway from AppleTalk-based QuickMail to QuickMail for MHS.

StarNine Technologies Inc. of Berkeley, Calif., currently sells Mail*Link MHS for QuickMail, a

See MHS, Page 20

QuickMail for MHS lives on Novell nets



KEVIN BERGER

Chesapeake fiber transceiver extends Ethernet connections

By Mitch Ratcliffe

Baltimore — Chesapeake Systems Inc. has shed some light on networking for industrial or heavily wired environments in which electromagnetic signals can interfere with Ethernet transmissions.

Available now, the $495 GeoLink transceiver allows users to connect fiber-optic cabling, rather than copper, to an Ethernet card. It can connect to any AUI (attachment unit interface) port on an Ethernet card, hub or router to provide 10-Mbps network communications over fiber-optic cable. GeoLink is transparent to Ethernet protocols, so it requires no special drivers in addition to those provided with a card.

Chesapeake said the GeoLink is especially appropriate for modifying backbone connections between hubs or routers since fiber allows longer cable runs and is immune to electromagnetic interference. Signals are less likely to be degraded in areas near electrical and phone equipment.

The company also said the transceiver can allow fiber connec-

See Chesapeake, Page 21

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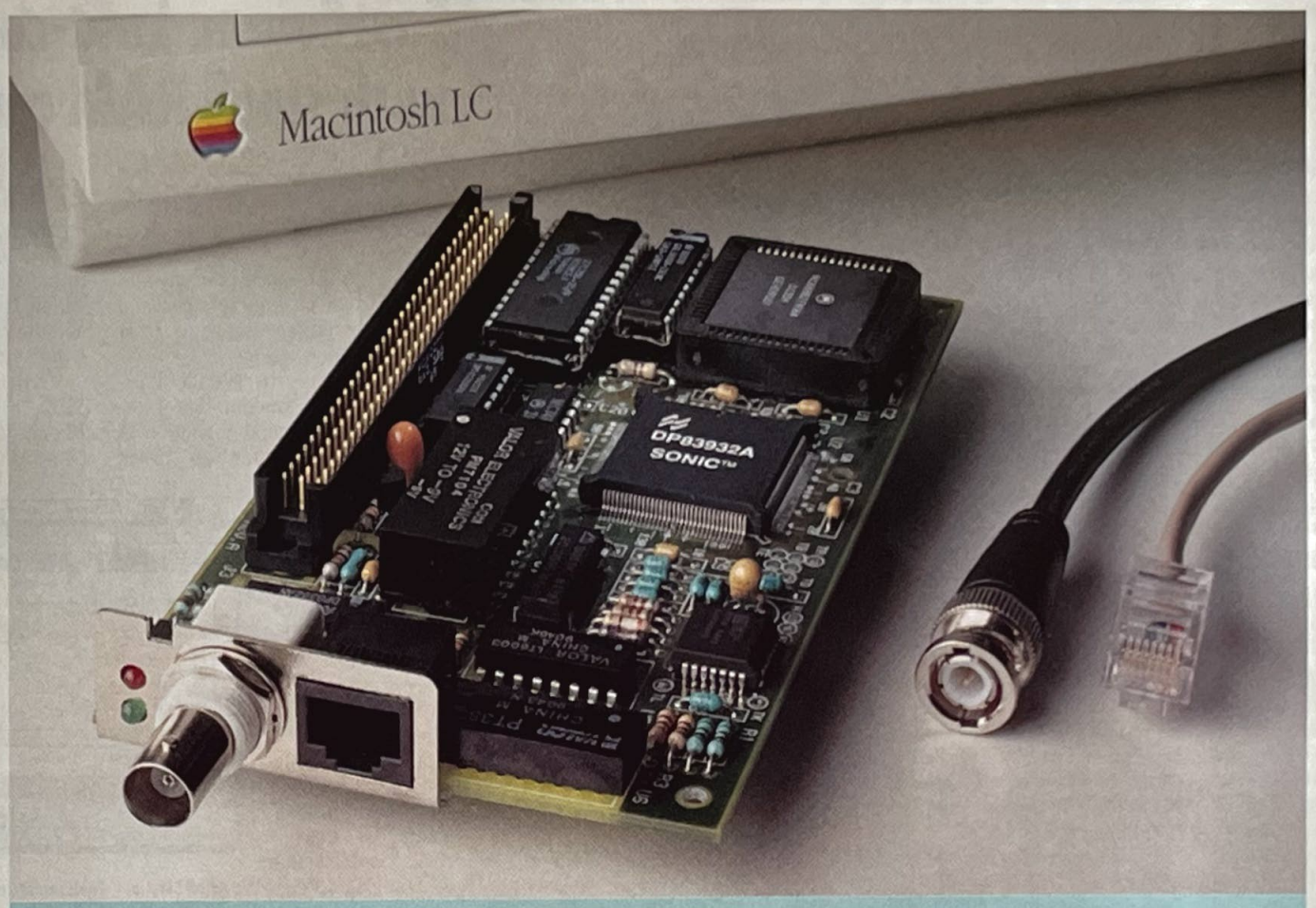


Multiple choice.

**Asanté's MacCon+ LC.
The card for the Macintosh LC
that lets you choose your
Ethernet media.**

This is the card with auto-sensing ports to connect your Macintosh® LC to Ethernet™ by using either Thin or 10BaseT media. It's the card that lets you choose media simply by plugging into either port. Without jumpers or switches. This is the card that offers you a socket for an optional floating point math co-processor to speed up all your math-intensive applications.

It's the MacCon+™ LC. The Ethernet card from Asanté,™ the leader in Macintosh networking.

The MacCon+ LC was designed using the new SONIC™ controller chip. So it has fewer components and enhanced reliability. And it carries our 5-year no-hassle warranty.

[The MacCon+ LC has an on-board socket for adding an optional Motorola 68882 math co-processor.]

And, like all our products, it meets IEEE Ethernet specifications. So you can be sure of its compatibility with all network hardware and software.

Call your reseller today. Ask about the MacCon+ LC Ethernet card from Asanté. And make the choice that gives you a choice.

Resellers are reminded that Asanté products are available from IngramMicro, Tech Data and Merisel.

ASANTÉ
ALL THE RIGHT CONNECTIONS™

Oracle

From Page 18

adding electronic-mail functions to Oracle Card front ends. The company said developers will be able to add a Mail button to their applications that automatically sends copies of documents to other users.

PostCard will support Oracle*Mail, Lotus Development Corp.'s cc:Mail and Microsoft Corp.'s Mail in its first release, with support for additional mail systems in later versions. The API will ship this fall for $299.

Oracle showed several sample applications created with Oracle Card and PalmLink. Trip Builder, a travel planner, allowed a user to select airline flights and hotels from an Oracle database loaded with information from the Official Airline Guide and establish an itinerary by clicking on destinations represented on a map of the United States.

Once the schedule was established, the traveler could mail copies to other users, as well as download the itinerary to a Wizard, by clicking on-screen buttons.

Although the Wizard is capable of storing relatively few records, Oracle's Marc Benioff, corporate vice president of the New Technology Division, said PalmLink is an example of the capabilities that will be built into Apple's Personal Digital Assistants (PDAs).

Apple, along with Seattle-based McCaw Cellular Inc., recently began experiments in data distribution on wireless networks.

Apple also is reportedly talking with Sharp about collaborating on consumer-electronics products.

"PalmLink is an API that could be used to broadcast data to Apple's PDAs and the products under development at (Mountain View, Calif.-based) General Magic," Benioff said. "We see Apple and Sharp as working on the user interface while we focus on database development."

PalmLink and PostCard will allow developers to build communications into both Macintosh and Windows front ends. The APIs will include eight runtime licenses.

Oracle Corp. is at 500 Oracle Parkway, Redwood Shores, Calif. 94065. Phone (415) 506-7000 or (800) 633-0598; fax (415) 506-7150.

Sharp Electronics Corp. is at Sharp Plaza, Mahwah, N.J. 07430. Phone (201) 529-8200 or (800) 321-8877. □

MHS

From Page 18

gateway between CE's AppleTalk-based QuickMail and MHS systems. A future version of the gateway may support exchange of graphical electronic-mail forms between QuickMail's AppleTalk and MHS clients, CE said.

Apple's anticipated October release of the Open Collaboration Environment (OCE) will change CE's development strategy, Skeie said. OCE will add messaging and directory services to the Mac operating system and a Finder-based interface for network communications.

"We will happily give up the support of operating system-level transport to an OS company [such as Apple]," Skeie said.

"The open E-mail standards that I believe will start emerging from operating system companies will give momentum to the next generation of E-mail," Skeie said. "We will then write mail clients much more powerful than before because of the capabilities incorporated in the OS."

In other news, CE announced plans to send a free QuickMail upgrade to all registered users by the end of the month. Version 2.5.1 should rectify problems some users experienced with remote dial-in and server-to-server connections via the Macintosh Communications Toolbox, the company said.

CE Software Inc. is at 1801 Industrial Circle, P.O. Box 65580, West Des Moines, Iowa 50265. Phone (515) 224-1995; fax (515) 224-1953. □

FastComm: Low-cost telecom with small RAM overhead

By Nathalie Welch

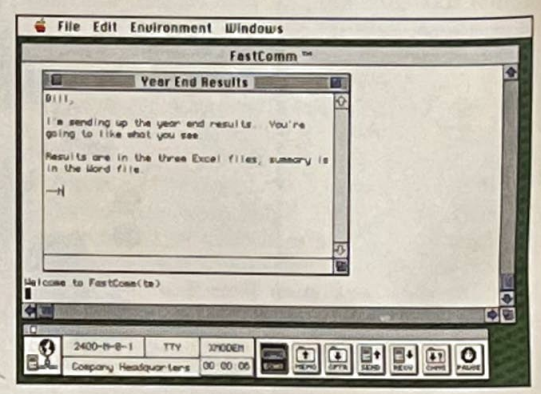
Beaverton, Ore. — Vertical Solutions has shipped a new low-priced telecommunications application designed to introduce new users to the world of on-line services and allow easy remote access to LAN electronic-mail systems.

Available now for $79.95, FastComm supports Xmodem file transfers and TTY terminal emulation. A floating tool palette lets users send and receive files and messages, change destination folders for incoming files, and capture transcripts of activity to disk. Users also can compose memos while on-line with a built-in text editor.

Requiring only 350 Kbytes of RAM, FastComm may be handy for PowerBook users, the company said. The program can run in the background and features an on-line timekeeper and an auto-dialing "address book" for listing on-line services.

FastComm requires the Macintosh Communications Toolbox, which is included in the package, and the Apple Modem Tool or other connection tools.

Vertical Solutions is at P.O. Box 1150, Beaverton, Ore. 97075. Phone (503) 671-0511; fax (503) 646-8248. □



Vertical Solutions' FastComm telecommunications application features a floating tool palette that gives users quick access to the program's features, such as the built-in memo editor.

Slim pickin's...

Finding a complete solution for networking Macintosh computers used to be about as easy as finding a ripe red apple during a mid-winter freeze. The pickin's were pretty slim... *until now!*

Cabletron Systems, the company that brings you the industry's most complete networking solution, now provides a rich harvest of connectivity options for Macintosh users to choose from—including Ethernet, Token Ring, and FDDI.

From wiring hubs and adapter cards, to sophisticated network management systems, Cabletron offers the broadest, most feature-rich product line for the Macintosh environment.

And with products such as Cayman Systems' LocalTalk-Ethernet GatorMIM routers—designed for integration into Cabletron's MMAC™ series of intelligent wiring hubs—Macintosh users are provided with standards-based networking capabilities tailored to their individual needs.

Microsoft tools convert 3+Mail servers

By Nathalie Welch

Redmond, Wash. — Microsoft Corp. has released conversion tools and announced a gateway to help users of 3Com Corp.'s electronic-mail packages switch to Microsoft Mail 2.1 for PC Networks.

The software release followed last month's announcement that Microsoft is taking over support for 3Com products built upon Microsoft's LAN Manager network operating system. 3Com has quit the network operating system and E-mail business.

Available now are Microsoft Mail Conversion Utilities for 3+Mail, which translate E-mail messages and file server-based directories from 3Com mail systems to Microsoft Mail's database format. These tools are free from Microsoft and are available in the company's support forums on the CompuServe Information Service and America Online.

After converting the server, users can exchange 3Com's 3+Mail Macintosh client software for both the DOS-based 3+Share and the OS/2-based 3+Open network operating systems for Microsoft's Mac Mail client software for Microsoft Mail for PC Networks.

Microsoft will upgrade current 3Com customers to Microsoft Mail for PC Networks 2.1 for $99. The upgrade offer, which is good until April 30, covers one server and any mix of up to 100 Mac, Windows and DOS clients.

In March, Microsoft will release the $99 Microsoft Mail Gateway to 3+Mail, which will link 3Com and Microsoft mail systems, allowing E-mail exchange without conversion.

Microsoft Corp. is at 1 Microsoft Way, Redmond, Wash. 98052-6399. Phone (206) 882-8080; fax (206) 936-7329. □

Engage announces WAN router

By April Streeter

Aptos, Calif. — To expand the globally networked Macintosh village, Engage Communication Inc. has announced an Ethernet wide-area network router.

EN+ is a new AppleTalk-compatible router due in March that will act as a hub for as many as four remote AppleTalk networks. Distant sites will be able to connect to a local Ethernet network via digital telephone lines. EN+ will support various digital standards, including ISDN (Integrated Services Digital Network); Switched 56; dedicated T1 lines; or X.25, a packet-switching protocol.

The router will be priced from $2,995 for an Ethernet connection and a single remote port. Additional remote ports can be added by the user. With four remote ports and either a 10BASE T or thin Ethernet port, EN+ will sell for $5,400.

Engage also announced a separate upgrade to SyncDialer, its digital connectivity application. Version 1.1b provides the capability to set up digital connections on demand and to schedule remote sessions. SyncDialer also can monitor the duration of remote links, disconnecting them when they exceed user-defined limits. This might prevent a remote call from being left running all weekend, the company said.

Engage Communication Inc. is at 9053 Soquel Drive, Aptos, Calif. 95003. Phone (408) 688-1021; fax (408) 688-1421. □

ACC offers bridging, routing hub for multiprotocol internetworks

By Nathalie Welch

Santa Barbara, Calif. — Advanced Computer Communications last month announced a new member of its ACC Enterprise System family, the ACCes/4500, a multiprotocol bridging and routing hub that the company said will allow managers to build large internetworks one step at a time.

Available now, the ACCes/4500 can simultaneously bridge or route many protocols, including AppleTalk Phase 1 and 2; DECnet; token ring; TCP/IP and wide-area protocols, such as X.25 packet switching and frame relay.

The ACCes/4500 ranges in price from $14,995 to $38,995 depending on configuration. It is available in five- and 11-slot enclosures, the larger of which supports up to 20 ports. Each slot supports two ports, which can be configured to route or bridge a specific protocol. Slots have redundant power sources, allowing for hot swaps of cards. This can reduce network downtime as administrators add or change the ACCes/4500's capabilities, the company said.

AppleTalk-to-frame relay routing will be added in the second quarter, enabling connections from Macs to remote networks using high-speed private and public frame-relay networks such as CompuServe Inc.'s. In addition to the bridge-router, users will need a digital telephone-line service unit to connect to a frame-relay network.

Advanced Computer Communications is at 720 Santa Barbara St., Santa Barbara, Calif. 93101. Phone (805) 963-9431; fax (805) 962-8499. □

Chesapeake

From Page 18

tions to individual Macintoshes when used with Ethernet cards such as Austin, Texas-based TechWorks Inc.'s $429 Multimedia Ethernet Card.

The company also sells prepared fiber-optic cabling for $4 per foot, plus $100 for cable preparation, which includes polishing and mounting in ST-type connectors.

Chesapeake Systems Inc. is at 905 Huntsman Road, Baltimore, Md. 21204. Phone (410) 583-7717; fax (410) 583-1787. □

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The Complete Macintosh Networking Solution™

Half the hassle or double trouble?

Running the same applications on both Macs and IBM PCs and compatibles seems like the route to interoperability. But do product pairs really increase productivity?

By Mitzi Waltz

They look alike, they sound alike, sometimes they even work alike — these are the twins of the software world. Several vendors offer similar versions of software for both Macs and IBM PCs and compatibles, and in a few cases have expanded to include VAXes and workstations from NeXT Computer Inc., Sun Microsystems Inc. or Silicon Graphics Inc. Managers buy these programs hoping they will work better together than their hodgepodge solutions of the past.

Have they found happiness? According to multiplatform managers contacted by MacWEEK, the answer seems to be yes, with some reservations.

Aren't they the same program? Standardization across computer lines is the goal at the Michigan State Senate in Lansing, said Caryl Holland, acting director of Senate information services. Holland has purchased several cross-platform applications, including WordPerfect, Fox Software Inc.'s FoxPro and Microsoft Excel. Although she said these programs have made transferring files between her 150 Macs and 350 PCs much easier, some documents still have to be reformatted after the switch.

"Everybody professes to have a seamless way of moving documents," Holland said, "but in WordPerfect, for instance, on the Mac side you have to save the document in a certain file format. You lose certain fonts that aren't supported on the PC. If I had a wish list, I'd like to see the applications not just have the same look and feel, but some standardization of basic fonts on both platforms," she said. "It really does become frustrating, not just for users, but from a support standpoint."

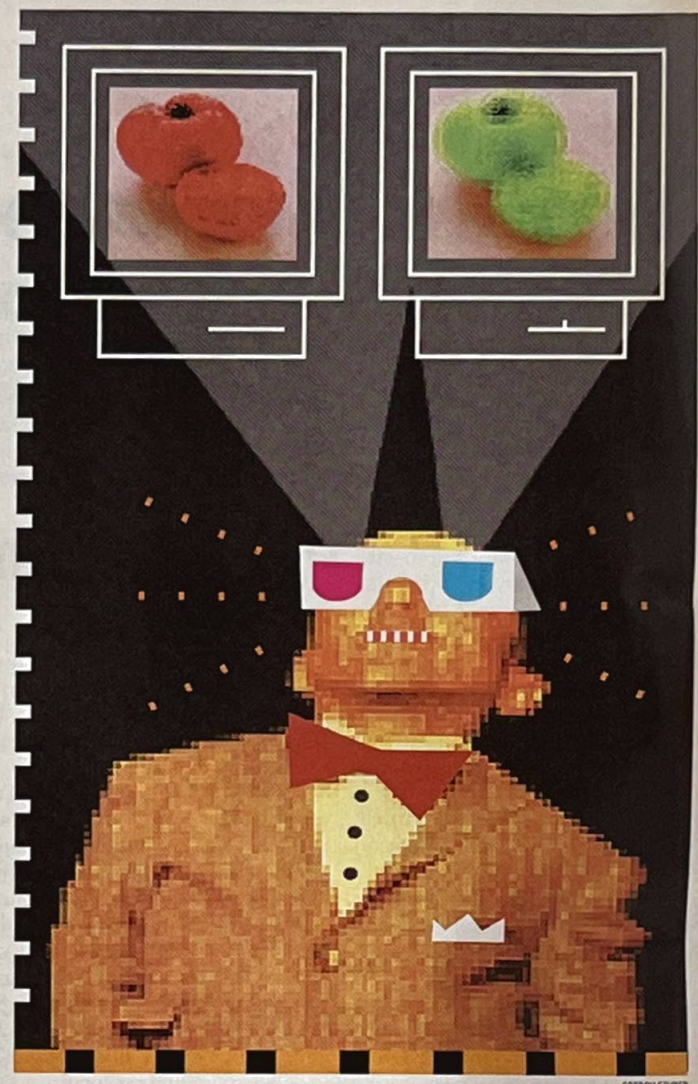
The Michigan Senate has a staff of in-house trainers to help employees gain cross-platform computing skills, but as the state government turns increasingly to consultants or contract employees to save money on support services, there's no guarantee that everyone will get up to speed quickly, she said.

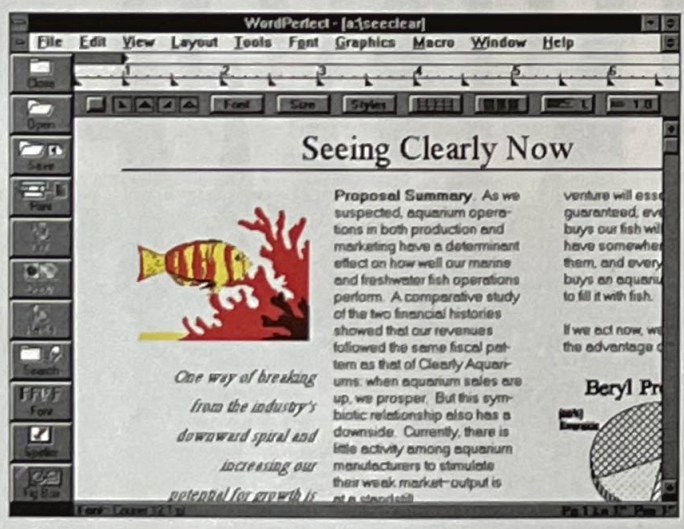
Sometimes, too, system software features make for problematic conflicts in cross-platform applications.

At Egeland Wood & Zuber Inc. of Scotia, N.Y., employees crank out advertisements on a mixed network with various programs, including Ventura Software Inc.'s Publisher and Aldus PageMaker and FreeHand. Elizabeth Wood, the company's president, said System 7 has been such a thorn in the side of the network that her agency is no longer using it.

"You've got to be real careful with publish and subscribe on any network, or your files can come unlinked and be lost forever," she said. "It doesn't work as well as OLE (Object Linking and Embedding)." Wood said she'd like to see data transfer capabilities improved even more.

"Some of the programs are totally compatible across platforms. You just take a disk from the IBM, stick it in a SuperDrive on the Mac and read it. I want to see that in more of them. You should be able to pull any file off a network and read it, too." Support for more text and graphics file formats is needed, especially on the Macintosh side, she added.


GORDON STUDER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Seeing Clearly Now
Proposal Summary. As we suspected, aquarium operations in both production and marketing have a determinant effect on how well our marine and freshwater fish operations perform. A comparative study of the two financial histories showed that our revenues followed the same fiscal pattern as that of Clearly Aquariums: when aquarium sales are up, we prosper. But this symbiotic relationship also has a downside. Currently, there is little activity among aquarium manufacturers to stimulate their weak market--output is
One way of breaking from the industry's downward spiral and increasing our

WordPerfect's flagship word processor illustrates the benefits and pitfalls of creating cross-platform "twin" products. The company's first release of its Mac product held true to the features of the popular DOS version but didn't satisfy Mac users' interface preferences. It wasn't until Version 2.0 for the Mac that the company found a balance between functionality and interface on two different platforms.

Network solutions. At Canada's Alberta Petroleum Marketing Commission, Richard Tovell, managing director of the information services division, uses Pathworks for Macintosh from Digital Equipment Corp. to tie two VAX 4300s to his 60 Macs. Although both platforms run WordPerfect, there's really no comparison in the way the program operates on these disparate machines, he said. "It just wouldn't look familiar if you have a Mac," Tovell said of the VAX version.

Luckily, the VAXes are used primarily as servers, and WordPerfect allows users to bring in word processing files in outside formats. Retranslating the files to Mac formats is "quite transparent," he said. Pathworks allows users to open VAX directories as Mac folders, and the networking software takes care of all the intervening file translation.

One of the biggest problems cross-platform users face is different update schedules for Mac and PC programs. "It gets a little irritating when you see some nice feature in [Aldus'] Persuasion PC that isn't there yet for the Mac and won't be for another six months or so," said Tim Bradley, computer support specialist for Cimarron International Inc., an Aurora, Colo., service bureau. Bradley, who manages 24 Macs and six PCs, is guiding his company through the first stages of cross-platform computing with PageMaker and Persuasion. Although he said PageMaker is "virtually identical" on the two machines, hardware problems such as reconfiguring boards to prevent conflicts can derail Mac operators who try to go PC, because they're used to plug-and-play devices.

One additional pitfall is the messy fallout that results when a cross-platform vendor stops supporting a platform. When Ashton-Tate sold its dBASE Mac back to the original developer, New Era Software Group Inc., companies that had standardized on the database program were forced to deal with two vendors on different schedules or port their data to a new application, such as Fox Software's FoxBASE series. The lesson: Make sure your vendor is equally committed to both platforms before choosing a package.

More to come. Jim Anderson, technical support specialist at Type House+Duragraph Inc., a Minneapolis service bureau, said he expects 1992 to bring stability to his Mac-IBM network. Anderson said he hopes to see more programs emulate the PC version of PageMaker's automatic recomposing feature, which preserves the file's layout when it is moved from the Macintosh. More font standardization would also be helpful. "There are special characters that don't translate easily. We have the entire Adobe font library on Mac and IBM," he said. "They seem to work pretty well together, but there have been some problems." □

Tools To Consider Using When Your Mac Won't Read DOS Disks.

For all you frustrated Macintosh owners who are trying to get MS-DOS files onto their Mac, we have a simple suggestion.

Count to ten. Then call Dayna. Because we've been making MS-DOS compatibility tools since 1985.

DOS Mounter works with the SuperDrive, as well as Bernoulli and other drives, to make MS-DOS disks and cartridges behave just as you'd expect on a Mac. Point, click and open right on the desktop. At $89.95 retail, it's a utility no Mac user should be without.

For 5.25" and 3.5" DOS floppy disks, DaynaFILE II provides the answer. This latest version of our popular disk drive has a low retail price of just $599. It too offers point and click access to MS-DOS disks. And as a bonus, DOS Mounter software comes free .

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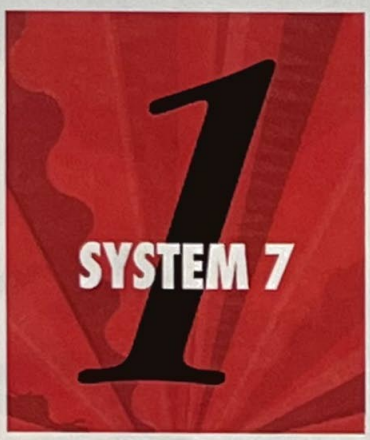
Now Shipping New DOS Mounter 3.0! Call Today For Details.

7 REASONS WHY YOU NEED A NEW WORD PROCESSOR.

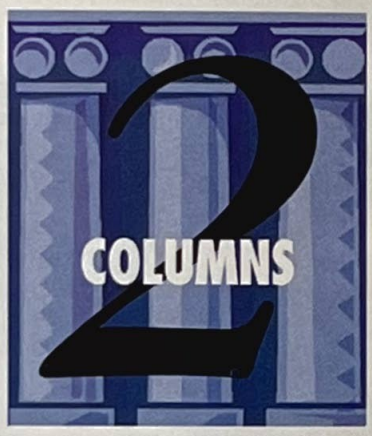


Because you're ready to see what System 7 can do.

Apple calls System 7 the biggest improvement in Macintosh since Macintosh. And WordPerfect® is now System 7 savvy.

So now (among lots of other new things), WordPerfect will automatically keep track of changes that you (or someone else) might make to imported files (charts, graphics, whatever), and update your WP documents accordingly. Now, a change made in one place can be a change made in many places. Apple calls it "Publish and Subscribe," and it works between programs on your hard drive, as well as among people on your network. Publish and Subscribe assures you that your documents will always reflect the latest information available.

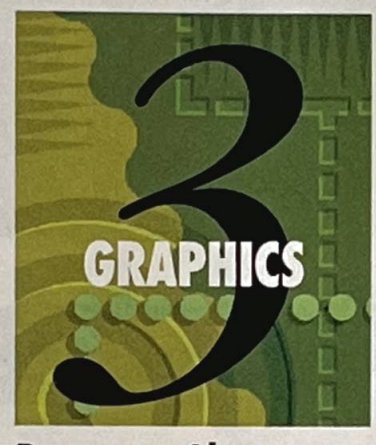
And it's just one of the new System 7 tricks that WordPerfect 2.1 has mastered.



Because WordPerfect does columns better than the Greeks.

Pick a starting point, click on the ruler, and see your text in two columns. Or in three columns. Or five columns. With vertical rules beside or between them, if you like. Drag a guide on the ruler and try *unequal* columns. Highlight text in a box that jumps across columns.

Go crazy with the design, or stick with the tried-and-true. The point is, WordPerfect gives you formatting options that other word processors don't. And exploring them couldn't be much easier.



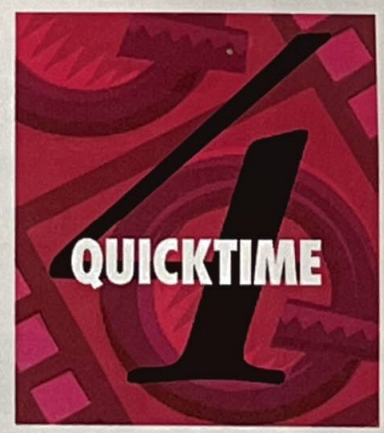
Because you'd use more graphics if using them were easy.

WordPerfect not only gives you full control over the placement of graphics in your text, it also gives you a color drawing program for modifying imported artwork (or starting over from scratch) without ever leaving the program.

You can print graphics under your text (as "watermarks") or on top (as overlays).

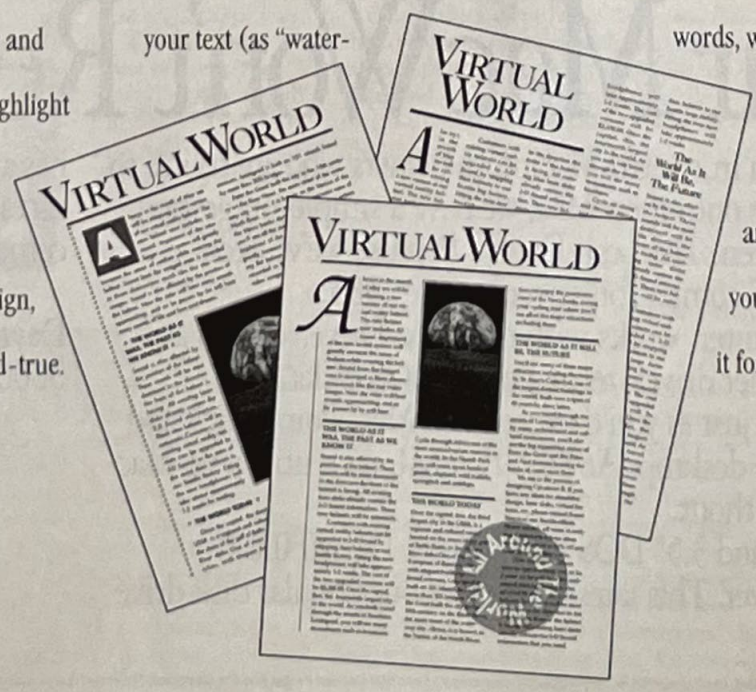
You can use the drawing tools to rotate text to any angle that strikes your fancy (something many page-layout programs still can't do).

And WordPerfect gives you 36 border styles and 64 fill patterns — which you can use in any of 256 colors — for highlighting graphics, paragraphs, columns, pages, even blocks of text.



Because a movie is worth who-knows-how-many words.

If a picture is worth a thousand words, what's a movie worth? With WordPerfect and QuickTime, you can calculate it for yourself.



Apple's QuickTime is a new technology that lets you work with digital video and sound as easily as you now work with text and graphics files.

Imagine being able to place (and size) a QuickTime movie anywhere in a document. You could add urgency to a memo with a few well-chosen words delivered "live." Or help an audience visualize your latest brainstorm with a 3-D simulation they can start, stop and replay.

We have a feeling that words can't begin to describe all the ways you'll think of to use it.

Because you get tired of repeating yourself, yourself, yourself.

Perhaps because they've heard it's a powerful programming language, WordPerfect's macro editor intimidates some people at first. It shouldn't.

It's no more complicated than a tape recorder. Click "record" and it memorizes your keystrokes. Click "play" and it repeats them.

With no more knowledge than that, you can create a WordPerfect macro. And can spare yourself the effort of formatting M-E-M-O-R-A-N-D-U-M, T-o-:, F-r-o-m: (and so on) across the top of the page every time you want to fire off a memo, for example.

But simple as recording your own macros can be, we also ship a number of them with the program. For formatting addresses to print on envelopes. Placing "drop caps" at the start of paragraphs. And other jobs you'd rather not do twice.

Because some people work on DOS computers.

You want the word processor that's right for you. If your choice happens also to be the choice of millions of others — with other computers — so much the better.

That's why WordPerfect is such a good choice. Lots of DOS users use WordPerfect. As well as UNIX, VMS and other users. If you ever find your Mac on a network with other computers, WordPerfect's compatibility can save you a lot of aggravation. Not to mention a lot of reformatting.

Because even if you never call us, it's nice to know we're here.

Like any good Mac program, WordPerfect 2.1 is easy to use. But unlike many Mac programs, you're not on your own with it. You get toll-free help from one of the largest support staffs in the industry.

For more reasons to try WordPerfect, call for our free video. 1-800-526-5001

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Ray Dream Designer previews in 3-D

Version 2.0 features network rendering

By Carolyn Said

Mountain View, Calif. — Distributed rendering and real-time previews highlight Ray Dream Designer 2.0, which shipped last week from Ray Dream Inc.

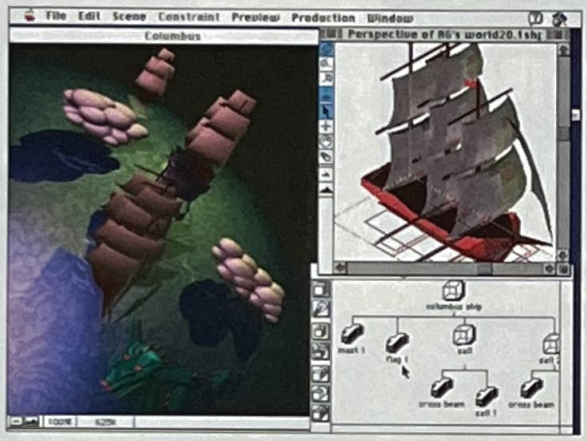
The 3-D illustration package, still priced at $895, consists of two modules: LightForge, for creating objects, and SceneBuilder, for assembling, lighting and rendering objects.

The program's new features include:

▸ **DreamNet** is Ray Dream's software scheme for distributing processing for computation-intensive rendering among multiple Macs (see MacWEEK, Aug. 6, 1991). The company said DreamNet offers linear improvements in performance; for example, distributing processing among three machines makes it run three times faster.

▸ **A virtual trackball** lets users preview illustrations from any direction or perspective in real time.

▸ **Reflections and transparancies** can now be previewed in real time.



Ray Dream Designer 2.0 now offers a hierarchical tree view (bottom right) showing how objects in an illustration are grouped.

"By being able to see in the preview window what I've done exactly as I do it, I eliminate guesswork," said beta-user Joseph Kelter, design technician at Marcolina Design Inc., a Philadelphia design company.

▸ **Editing tools** let users manipulate primitives with Bezier curves. Kelter said this feature allows him to "create twists, like a screw or a lampshade with intricate turning details around the edge of the lamp."

▸ **The SceneBuilder module** now lets users see views in true 3-D space rather than the traditional CAD approach of imaging a 3-D object by looking at it from different 2-D views. In general, Kelter said, "It's fast and I know what I'm getting."

Upgrades range from $100 to $149.95 and are free to users who purchased the program after Jan. 1.

Ray Dream Inc. is at 1804 N. Shoreline Blvd., Mountain View, Calif. 94043. Phone (415) 960-0768; fax (415) 960-1198. □

In Focus makes new resolution with LCD projection panels

By Nathalie Welch

Tualatin, Ore. — In Focus Systems Inc. this spring will release four new LCD projection panels, including a color passive-matrix panel offering resolutions of up to 1,024 by 768 pixels.

The new panels are directly compatible with the Mac II family. In Focus sells an adapter for $119.95 for use with the compact Macs. PowerBook users can take advantage of the projectors through a SCSI video adapter from a third-party source such as Radius Inc. or Envisio Inc. (see MacWEEK, Oct. 22, 1991).

▸ **The 1600GS,** priced at $1,695, is a passive-matrix panel featuring 16 levels of gray scale. It has a contrast ratio of 25-to-1 and 640-by-480 resolution.

▸ **The TVT-3000,** priced at $5,995, is an active-matrix panel offering 262,144 colors. It has a contrast ratio of 100-to-1 and 640-by-480 resolution. The panel can run QuickTime movies at 30 frames per second. It also can show live video from an external source with the aid of an NTSC (National Television System Committee)-to-RGB (red, green, blue) converter, available from In Focus for $6,495,

▸ **The 7000FX+,** priced at $4,995, uses the company's proprietary triple supertwist nematic (TSTN) technology to provide users with a passive-matrix panel capable of a contrast ratio of 20-to-1. The panel has 640-by-480 resolution and offers 24,000 colors.

▸ **The 7600XGA,** priced at $7,995, is a TSTN passive-matrix panel that can project images at 1,024 by 768, 800 by 600 and 640 by 480 with up to 24,389 colors displayed.

The 1600GS is scheduled to ship in April. The other panels will be released later in the spring.

All new panels enable the user to see the image on the monitor and projection screen simultaneously. Other features include on-screen menus for color adjustment and tracking, and reverse image mode. All but the 1600GS come with a remote control for image adjustments.

In Focus Systems Inc. is at 7770 S.W. Mohawk St., Tualatin, Ore. 97062. Phone (503) 692-4968; fax (503) 692-4476. □

Large halftones meet PostScript

By Stuart Silverstone

Fairfield, N.J. — Cactus, a digital printing systems integrator, is now offering a new random halftoning system for continuous-tone poster-size output.

The Cactus system outputs scanned images and PostScript files on a low-resolution color plotter. It can generate panels measuring up to 42 inches by 20 feet that can be tiled to create large displays or billboards.

"With Cactus' paneling software, you can make murals as big as you want. Christo could panel the whole perimeter of Hawaii," said Harry Bowers, a Cactus partner and founder of Bowers Imaging Inc. in San Francisco, referring to the contemporary artist known for his monumental installations.

Bowers developed an error-diffusion technique for the Cactus system that renders lighter halftone dots in a rectangular grid and darker grays in a random pattern. The resulting blend produces continuous tones, without "worms" or other disruptive patterns, on a 200-dpi, 44-inch-wide color Xerox/Versatec plotter.

Jim King, manager for advanced

See Cactus, Page 28

Desktop Paintbox lets users handle large TIFF images in real time

By Neil McManus

Boston — Imagine composing, manipulating, retouching and color-correcting huge TIFF images in real time on a Quantel Paintbox and linking them directly to page layouts on your Mac.

Quantel Inc. next month will release its Desktop Paintbox, a $150,000 system that does just that. Quantel will demonstrate the system at Seybold Seminars 92 here this week.

Users manipulate images on a Quantel tower box that contains six parallel-processing boards. Each board holds several custom application-specific integrated circuits (ASICs) dedicated to specific graphics tasks. Quantel software lets users link TIFF files from the Paintbox directly into Mac documents. The Mac can call up TIFF images from the Paintbox "at hard disk speeds" through a proprietary NuBus communications board, the company said.

Unsharp masking applied to a 20-Mbyte TIFF image takes six seconds on the Desktop Paintbox, compared with seven to 10 minutes using Adobe Photoshop on a Quadra 900 equipped with 64 Mbytes of RAM, according to Quantel.

The Paintbox comes with a 19-inch 24-bit-color display system, a pressure-sensitive stylus and tablet, a keyboard, a magneto-optical disk drive, and a 520-Mbyte hard disk.

Quantel Inc. is at 85 Old Kings Highway, North Darien, Conn. 06820. Phone (203) 656-3100; fax (203) 656-3459. □

Ready,Set,Go! reaches 5.0

By Carolyn Said and Shawn Tomlinson

Hartsdale, N.Y. — Ready,Set,Go!, the oldest surviving Mac desktop publishing software, this week will reappear in a new version — sort of.

Manhattan Graphics Inc., the program's original developer, said Ready,Set,Go! 5.0 is actually an updated version of DesignStudio 2.0, its higher-end DTP sibling. Manhattan recently reacquired both programs from Letraset of Paramus, N.J. (see MacWEEK, Dec. 3, 1991).

Ready,Set,Go! 5.0, priced at $395, will replace both the $295 Ready,Set,Go! 4.5 and the $795 DesignStudio.

Like DesignStudio, but unlike the previous Ready,Set,Go!, the program features a pasteboard area; full rotation of text and graphics; sophisticated typographic controls; four-color separation; and annexes, or add-on software modules. An annex called ReadyScript lets users automate creation of Ready,Set,Go! documents.

Unlike DesignStudio 2.0, the new Ready,Set,Go! works with QuickDraw printers and fax modems and no longer requires a floating-point coprocessor to perform color separations. The program now is 32-bit-clean and System 7-compatible, Manhattan said.

Although the programs have some loyal adherents, analysts said they were dubious about Ready,Set,Go!'s prospects.

"DesignStudio has the best color separation out there," said user Jim Harris, owner of Harris Graphics Design in Santa Rosa, Calif. "I tried to switch to QuarkXPress and I can't."

But Craig Cline, associate editor at Seybold Publications in Malibu, Calif., said the new program "would have to be such a revolutionary thing that it completely blows [Aldus] PageMaker and Quark away, and be completely compatible with those two as well, to encourage

See Ready,Set,Go!, Page 28

Ready,Set,Go! 5.0 combines features of Ready,Set,Go! and DesignStudio. It features a pasteboard area, full rotation of elements, typographical controls and four-color separation.

SuperMac Announces More Bang For Less Bucks.

For the past year, SuperMac™ cards and displays have been blasting the reviewers out of their seats—with record-setting performance and quality. But there's been one last barrier to shatter: *price*. Get set for the explosion! We've just lowered our prices by as much as 40%, so you can put SuperMac's award-winning products to work—now—in color publishing, digital video, and business productivity. More than ever before, SuperMac is the industry's price/performance leader; the *one* name that stands for **color ... speed ... power ... and affordability!** For the location of your nearest SuperMac reseller, call: **1-800-334-3005** or **408-773-4498** (outside U.S.).

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MacWEEK Review

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Macworld Magazine

"Best Products of 1991 Award: Thunder/24 from SuperMac."
Byte Magazine

SuperMac	Old Price	*New Price*	Competition	
Graphics Cards				
SuperMac Thunder/24	$4,999	$3,499	—	*No Competition*
Spectrum/24 PDQ Plus	$3,999	$2,399	$3,499	RasterOps 24XLi
Spectrum/24 Series III	$2,499	$1,699	$1,999	Radius PrecisionColor 24X
Spectrum/24	New	$1,199	—	*No Competition*
Spectrum/8•24™ PDQ	$1,399	$ 999	$1,499	RasterOps 8XLi
Color Displays				
SuperMatch 21" Two-Page	$4,400	$3,649	$4,499	RasterOps 21" Color Monitor
SuperMatch 20" Trinitron®	$4,200	$2,999	$4,299	RasterOps 19" Color Trinitron®
SuperMatch 20"	$2,800	$1,999	$2,499	Radius PrecisionColor Display/19
SuperMatch 17"	New	$1,199	$1,549	Radius Color Pivot

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Illustrator, FreeHand images go 3-D

Satellite 3D works with EPS objects

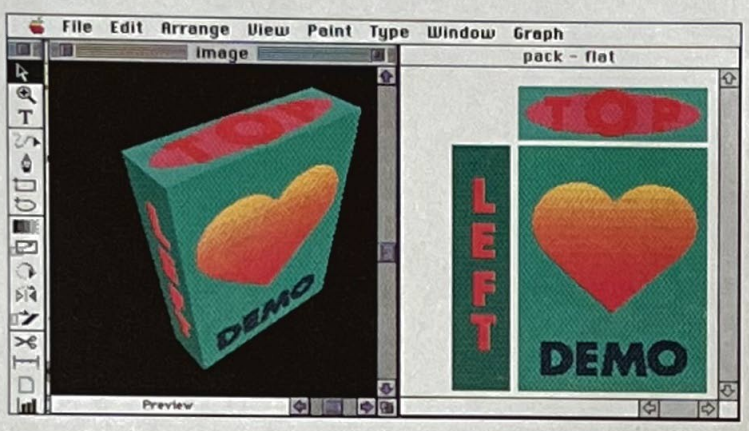
By Carolyn Said

Mountain View, Calif. — Adobe Illustrator and Aldus FreeHand users can add an extra dimension to their artwork with Satellite 3D, a $199 program recently imported from France.

Marketed in the United States by Calliscope Software Dept. US, Satellite 3D puts Illustrator and FreeHand images into 3-D perspective. It also works with objects or type saved in Encapsulated PostScript.

Images can be applied to the faces of parallelepipeds (objects with six sides, each a parallelogram), a feature that Calliscope said is particularly useful in package design.

Satellite 3D can extrude objects and compute surface illumination from various angles. In addition, objects can be moved or rotated in space; the observer's position also can be moved.



With the Satellite 3D application users can apply 2-D FreeHand or Illustrator images (right) to the faces of a cube (left) to create an object with correct 3-D perspective.

In addition, Satellite 3D can automatically save sequential movement steps for use in creating an animation.

Once put into 3-D perspective, images can be saved in Illustrator, PICT2 or EPS file formats.

Calliscope Software Dept. US is at 801 Church St., Suite 1112, Mountain View, Calif. 94041. Phone (415) 964-8550; fax (415) 964-8336. □

Photo, art sourcebook publishers preparing CD-ROM-based catalogs

By April Streeter

San Francisco — Looking for the perfect picture or the best computer artist to produce one? Several companies have announced upcoming CD-ROM versions of their photo and illustration sourcebooks.

As more CD-ROM players appear on corporate desktops, the race is on for publishers of standard art catalogs and photo sourcebooks to supplement their print titles with disc versions.

"It's a very competitive market. All I ever hear is who's putting out what on CD," said Hunt Stehli, president of the Blackbook Marketing Group, based here.

Stehli said he hopes to release a Macintosh CD-ROM version of the Blackbook Stockbook this summer. Los Angeles-based Scott and Daughters Publishers Inc. plans to ship a CD-ROM version of its Stock Workbook #6 in September.

While glossy sourcebooks let corporate art buyers see the image offerings of image stock houses, The Virtual Portfolio, from start-up company One World Interactives, will focus on 250 individual Mac artists. The Eugene, Ore., company will mail 10,000 prospective buyers 400 Mbytes worth of Macintosh illustrations and animations on its CD-ROM, due in June.

Cost is one reason artist Peter Anthony of Eugene, Ore., is putting his illustrations on the Portfolio. A one-page full-color insert in a standard graphic stockbook can run between $2,000 and $5,000. "Because of those prices, I've never put my work in a book. It's too high for me," Anthony said.

Comparable space on The Virtual Portfolio, which charges on a per-megabyte basis, is about $1,300, said graphic artist and company principal Charlie Magee.

The Virtual Portfolio will be more egalitarian than traditional sourcebooks since artists' images will be scrambled so viewers see a different mix each time they look at the "book," Magee said. However, viewers will be able to quickly jump back to a picture or artist that interests them, he said. □

Artists' images on The Virtual Portfolio, due in June, will be scrambled, giving viewers a different mix each time they look at the CD-ROM sourcebook.

QMS lowers cost of PostScript color thermal printers

By Matthew Rothenberg

Mobile, Ala. — QMS Inc. is lowering the prices of three of its 24-bit-color, thermal-transfer PostScript printers, cutting $1,000 each from the price of its ColorScript models 10p and 30i, and $1,500 from the ColorScript Model 10.

- **The ColorScript Model 10p,** a 1-page-per-minute, letter-size model that comes with 4 Mbytes of RAM is now $5,995.
- **The ColorScript Model 10,** which supports legal-size output at 85 seconds per page and comes with 5 Mbytes of RAM, is now $6,995.
- **The ColorScript Model 30i,** which outputs tabloid-size pages at 105 seconds per page and comes with 8 Mbytes of RAM, is now $9,995.

All the ColorScript printers feature resolutions of 300 dpi, and each includes 35 resident PostScript typefaces; a SCSI port; and RS-232C serial, Centronics parallel and LocalTalk interfaces.

In addition, QMS announced $250 and $500 rebates on the ColorScript models 10 and 30i, respectively. These rebates are available through April 15, according to QMS.

QMS Inc. is at 1 Magnum Pass, P.O. Box 81250, Mobile, Ala. 36689-1250. Phone (205) 633-4300; fax (205) 633-0013. □

Bitstream Type Essentials packages tackle letters, brochures, headlines

By Neil McManus

Boston — Bitstream Inc. this month will release four new typeface packages aimed at business users.

The typefaces in the four Bitstream Type Essentials packages were selected to work well in different categories of business documents, according to the company.

- **Letters, Memos & Faxes** contains Dom Casual, Handel Gothic, Kaufmann, Square 721 Condensed, Windsor, and four styles each of Bitstream Charter and Humanist 521.
- **Newsletters, Brochures & Announcements** includes American Text, Broadway, P.T. Barnum, Ribbon 131 Bold, Schadow Black Condensed, and four styles each of Goudy Old Style and Incised 901.
- **Spreadsheets, Graphs & Presentations** contains Exotic Demi Bold, Raleigh Demi Bold, Raleigh Extra Bold, Seagull Heavy, Pica 10 Pitch, and four styles each of Zapf Elliptical and Swiss 721 Condensed.
- **Headlines** comes with Cloister Black, Embassy, Hobo, Humanist 521 Extra Bold, University Roman and Zurich Bold Extra Condensed.

The Bitstream packages retail for $149 each except for the Headlines collection, which is priced at $99. Each package contains both Type 1 and TrueType versions of the fonts.

Each package ships with a guidebook designed to help business users create more-appealing publications.

Bitstream Inc. is at 215 First St., Cambridge, Mass. 02142. Phone (617) 868-6222; fax (617) 868-4732. □

Cactus

From Page 26

technologies at Adobe Systems Inc. of Mountain View, Calif., compared the effect achieved with Cactus to first looking at a page with a magnifying glass, then looking at it normally. "With standard screening techniques, you would see huge dots," he said. In contrast, the Cactus system creates a more-natural pattern, he said.

The Cactus system includes an accelerated Mac IIfx that contains a NuBus card equipped with a digital signal processor (DSP). The DSP board does mathematical routines for image enhancement, halftoning algorithms and scaling. Adobe's CPSI software-based PostScript interpreter provides PostScript rasterization.

The DSP board also powers a proprietary software-based density masking system that analyzes color by hue, saturation and lightness. Independent color correction can be made in any color zone of an image. This allows users to adjust the red in a tomato and the green in a head of lettuce separately in the same image.

"Cactus gives the designer a different way to look at an exhibit panel. Rather than just use spot color, he can put gradated tones in a background to create any type of graphic he wants," said Len Rizzo, a designer with Martin Marietta Corp. in Orlando, Fla., who beta tested a Cactus system at Triangle Reprographics Inc.

Rizzo's in-house corporate communications department used to do its designs on the Mac, then used conventional photo enlargements, silk screens and vinyl cutouts to produce large color signs for trade shows. Now, Triangle Reprographics laminates both sides of the Cactus paper output to create richly colored banners.

The basic Cactus system sells for about $150,000 and is aimed at photo labs, in-house corporate graphics departments and billboard companies. Cactus also is selling its system to graphic reproduction service bureaus. At service bureaus, Mac users are expected to purchase output at about $10 to $12 per square foot for mockups and final art in trade shows, advertising, legal graphics, signage and other large-format applications.

Designers can send Mac files by disk or modem to service bureaus equipped with the Cactus system or send artwork that can be scanned at high resolutions and then integrated into a Mac layout.

Cactus claims that its system is four to 10 times faster than a competing PostScript-compatible system developed on the Xerox/Versatec plotter by Colossal Graphics Inc. of Palo Alto, Calif. Bowers said much of the speed is a result of its DSP board, which can correct all 16.7 million colors on an image of any size in less than a second.

Cactus is at 17 Industrial Road, Fairfield, N.J. 07004. Phone (201) 575-8810; fax (201) 575-9626.

Triangle Reprographics Inc. is at 417 W. Gore St., Orlando, Fla. 32806. Phone (407) 843-1492. □

Ready,Set,Go!

From Page 26

people to trade up. Combining Ready,Set,Go! and DesignStudio and adding a little to them won't do that. It's just too late."

Ready,Set,Go! upgrades are $69.95 from Version 4.5, $89.95 from any previous version and $29.95 from DesignStudio 2.0

Manhattan Graphics Inc. is at 250 E. Hartsdale Ave., Hartsdale, N.Y. 10530. Phone (914) 725-2048; fax (914) 725-2450. □

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QMS-PS

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Unlike most printers that merely claim to be appropriate for network applications, the QMS-PS® 1700 was conceived and built to fulfill one basic objective: To be the most efficient printer there is in a network environment. In terms of cost, as well as performance.

Proprietary software that resides within a 25 MHz RISC controller is what sets this printer apart.

It handles PostScript® documents up to six times faster than printers with the more common 68020 microprocessor. And it's the heart of an architecture that you'll find in printers from QMS® and only QMS. We call it Crown.

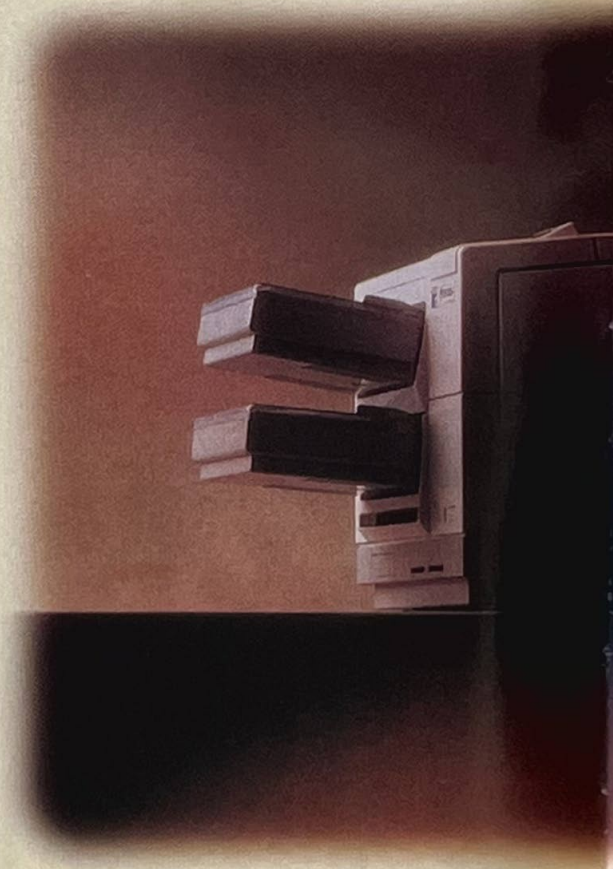
Crown architecture is the platform for everything that makes our printers The Network Printers.™ Consider whether its benefits would help your group work more efficiently.

The QMS-PS 1700 recognizes incoming data and selects the right printer language, without troublesome software reconfigurations.

The QMS-PS 1700 connects to Ethernet® configured as DECnet®, TCP/IP, Netware®, or EtherTalk™ or to Token Ring® configured to support Netware. And it will receive and process data over all its interfaces simultaneously. So it can be shared between multiple computers with different operating systems.

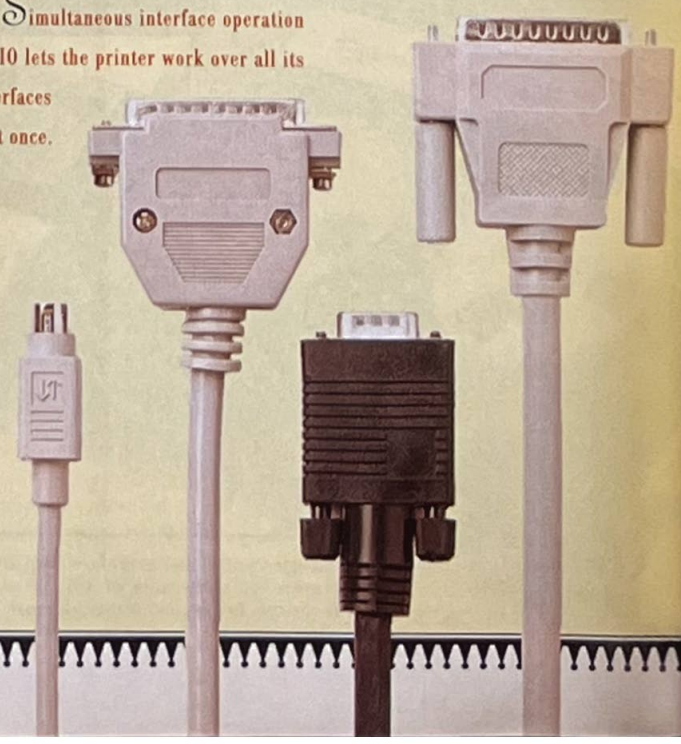
Multi-res lets you switch between the exceptional output of 600 dpi and the speedier, everyday 300 dpi resolution.

A ROM card gives the LAN administrator control over the printer's settings.



The QMS-PS 1700 carries a two-year warranty. QMS national service enjoys a 97% service satisfaction rating. And all consumables and accessories are available from one dependable source – us.

Simultaneous interface operation or SIO lets the printer work over all its interfaces at once.



1700 We choose our computers for their ability to perform well within networks. Shouldn't the same criterion now apply to our printers?

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	QMS-PS 1700	HP IIIsi
Both 300 and 600 DPI resolution	✔	
Concurrent interfacing	✔	
Spooling	✔	
Context switching	✔	
Security system	✔	

You could compare the QMS-PS 1700 to the HP IIIsi, but there really is no comparision.

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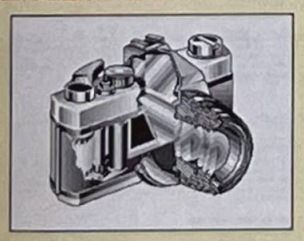
Crown architecture. Proprietary hardware and software design that makes our printers The Network Printers.

Sun® Workstation

The QMS-PS 1700 printed this file in 62 seconds. The HP® LaserJet® IIIsi took 180 seconds. That's almost 3 times as fast.



PC Compatible

The Emulation Sensing Processor or ESP selects the appropriate printer language without time-consuming reconfigurations.

1-800-523-2696

Its input buffers increase throughput by spooling jobs so that host applications aren't hung up waiting for files to print.

The input capacity of the QMS-PS 1700 is 1,000 sheets. Output is 500. And there's an optional duplexer for two-sided work.

What's more, if a job is interrupted for any reason, this printer has the intelligence to reprint any needed pages and then continue with the job.

Its context switching capability preserves "states", such as fonts and macros, when switching between emulations so you needn't waste time downloading them each time an emulation is selected.

Storage capacity for font caching, and font or emulation storage, can be expanded with optional internal and external SCSI hard drives.

And there's even an optional System Security Card that lets the LAN administrator control settings and avoid the chaos that can result from unauthorized end-user adjustments.

The QMS-PS 1700 is quite a bit more than a laser printer. In fact, it's exactly what most work groups need but haven't been able to find. Until now. The QMS-PS 1700 is The Network Printer.

QMS

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Greater demands put on DTP software for tech docs

Software for producing large technical documents — FrameMaker, Interleaf Publisher and Ventura Publisher — is beginning to address cross-platform issues, as well as compliance with government standards.

By Mitzi Waltz

Pages and pages of complicated instructions, technical diagrams of mechanical processes, indexes longer than some annual reports ... these are a few of Evelyn Alemanni's favorite things. Alemanni, president of Escondido, Calif.-based Visual Integration, creates a variety of technical documentation, including software-user guides and hardware manuals.

It's considerably more complicated than paginating a newsletter. Often the process is undertaken concurrently with creating the product itself, so changes are daily and short deadlines are the rule. It follows that technical-documentation production software would have to be forgiving when it comes to constant text revisions; offer easy formatting and reformatting; provide ways to use templates and save boilerplate copy; and be capable of creating all sorts of tables, indexes and footnotes. And indeed, that's been the industry's direction, according to Sandra Churchill, senior market analyst at BIS Strategic Decisions in Norwell, Mass. Churchill said future trends include a greater focus on standards compliance, support for more platforms and improved layout options.

The 'big three' — to date. Right now there are three main technical-publication programs on the Macintosh: Ventura Publisher, Macintosh Edition from Ventura Software Inc. of San Diego; FrameMaker from Frame Technology Corp. of San Jose, Calif.; and Interleaf Publisher for the Macintosh from Interleaf Inc. of Waltham, Mass. Each has its own group of followers, although users constantly search for new answers to old — and new — problems.

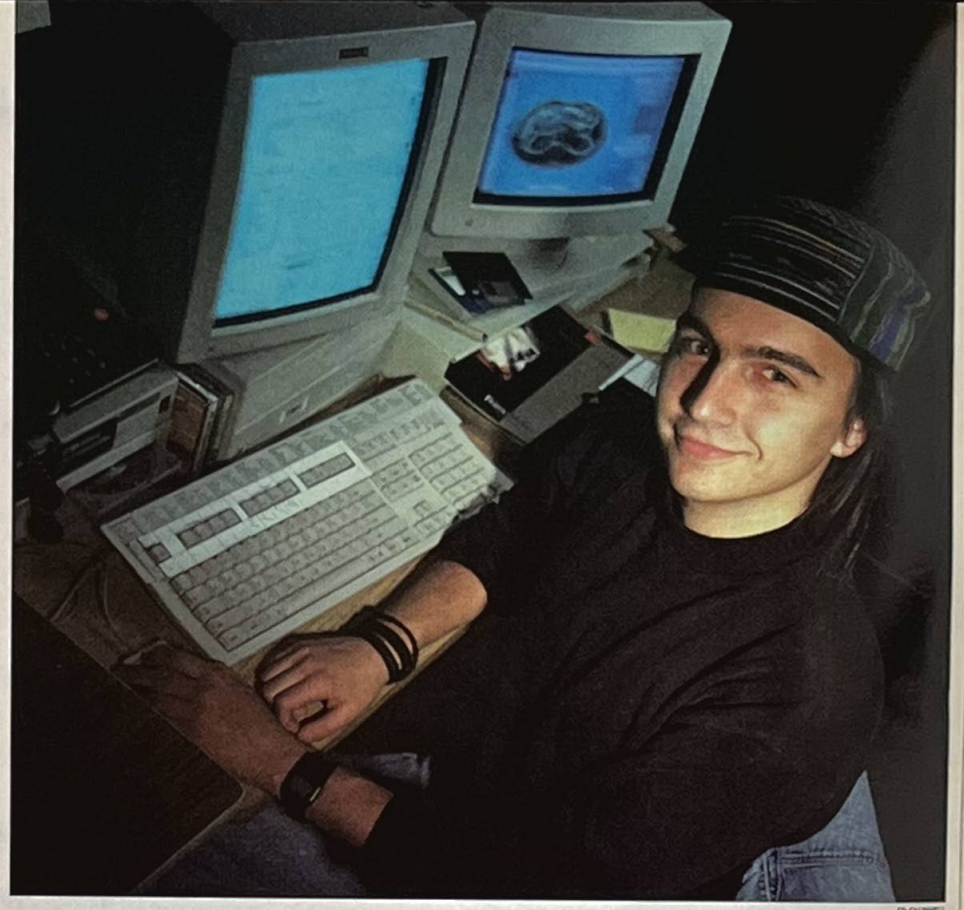
Alemanni said she welcomes any new feature that might make her job easier. She usually gets started the hard way: Clients hand her a product and say, "figure it out, and let us know when the manual's done." She'll use any program her clients ask for, but her favorite is the $795 Ventura Publisher, Macintosh Edition. "It's very solid, it's stable, and it's well-integrated," she said. Programs used for technical documents must be easy to learn so clients can update documentation in-house if needed, she added.

Alemanni said one of her typical projects was creating manuals for a new Fujitsu point-of-sale terminal. The manual included 2,000 pages of dense text in several volumes that she input with Ventura Publisher and formatted as she worked. "Ventura's table-of-contents generation and automatic indexing, the way it works with other programs and the control it gives the user over documents are all fabulous features, as is the ability to do a lot of graphics within the program," Alemanni said. "The one feature that's still really obnoxious is when you have graphics in anchored frames and you add text, you have to go through a couple of keystroke sequences to repaginate it."

Content vs. surface. Lovely layouts are the goal of most publication designers, but in technical documentation the content quality and accessibility are the most important element. Corporate or government standards may dictate data-filled "gray" pages, with little white space or graphics to break up the monotony. Because print runs are small, color is generally prohibitively expensive, and any graphics used tend to be for informational or organizational purposes only.

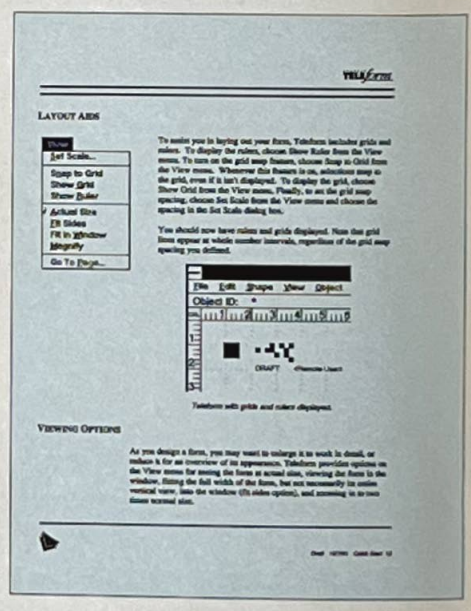
At SUMMIT, a research group within Stanford University Medical School in Stanford, Calif., Associate Director Ramon Feliciano turns to Aldus Corp.'s FreeHand for any graphics more complicated than "page-layout stuff, like rules and boxes," he said. Feliciano brings his illustrations into FrameMaker, priced at $795, to create medical courseware documentation and in-house technical documents for students working on new courseware. "FrameMaker can [create graphics], but it's fairly limited — the graphics interface isn't as slick as the rest of it," Feliciano said.

See Technical, Page 34

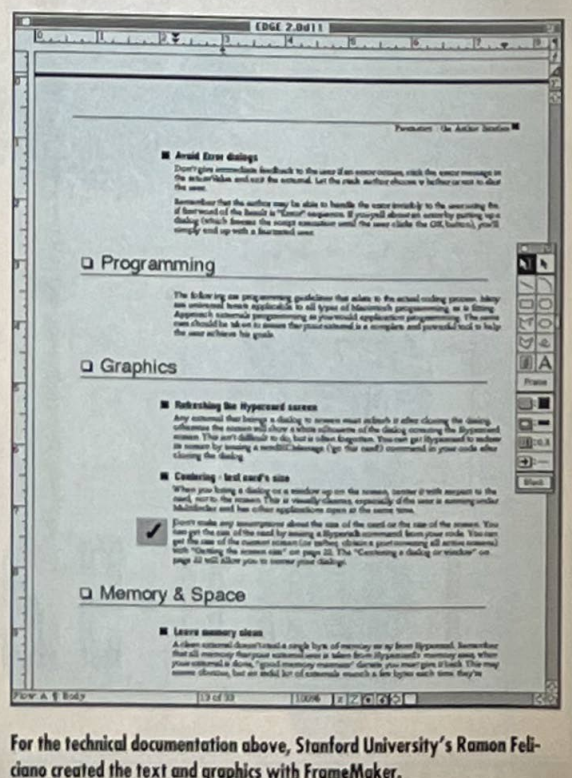


ED CALDWELL

Ramon Feliciano at Stanford University Medical School edits FrameMaker's guidelines for a HyperCard XCMD, used in the school's medical software (right screen).



Visual Integration created this page as part of a 220-page Teleform software manual using Microsoft Word. The illustrations were created in other programs.



For the technical documentation above, Stanford University's Ramon Feliciano created the text and graphics with FrameMaker.

Bechtel hones in-house publishing

By Clair Whitmer

At Bechtel Corp.'s Marketing Communications Services department, being in-house hasn't meant being sheltered from the competition. And keeping competitive with outside agencies has meant maintaining an electronic-publishing system that includes two hardware platforms and more than 50 software packages, including QuarkXPress, Adobe Illustrator and Photoshop, Aldus FreeHand and PageMaker, and Deneba Software's Canvas.

"I know it's a trite expression, but we really are customer-driven," said Larry Nuckols, manager of the 60 employees that make up the combined editorial and design staff called Marketing Communications Services.

Created some 30 years ago, MCS provides writing, design and publishing services to the approximately 4,000 employees who report to the engineering and construction behemoth's regional and U.S. headquarters in San Francisco.

Last year, the department handled more than 500 projects of a wide range of quality and complexity, including a new employee's business card; a 2,000-page engineering report; and a slick, four-color master plan for the New Seoul Metropolitan Airport dense with maps, reproduced CAD drawings and engineering diagrams. Many of Bechtel's divisions also refer business from such affiliates as Chevron USA Inc., Pacific Gas & Electric Co. and the U.S. government to MCS.

But those 500 jobs — most of them schedule-driven and subject to formal review cycles — didn't just get dropped off at the front desk, marked "for delivery when ready."

For any complex jobs, MCS must prove it can provide the desired technical and artistic results, with the highest cost-efficiency, or Bechtel employees have the option of going elsewhere. Or worse, says Editorial Manager Peter Losh, they can try to do it themselves.

"That's another challenge: when the engineer wants to do it himself on his PC, and then turns out these disasters. Then the client comes to us and says, 'This is inadequate,'" Losh said.

See In-house, Page 36

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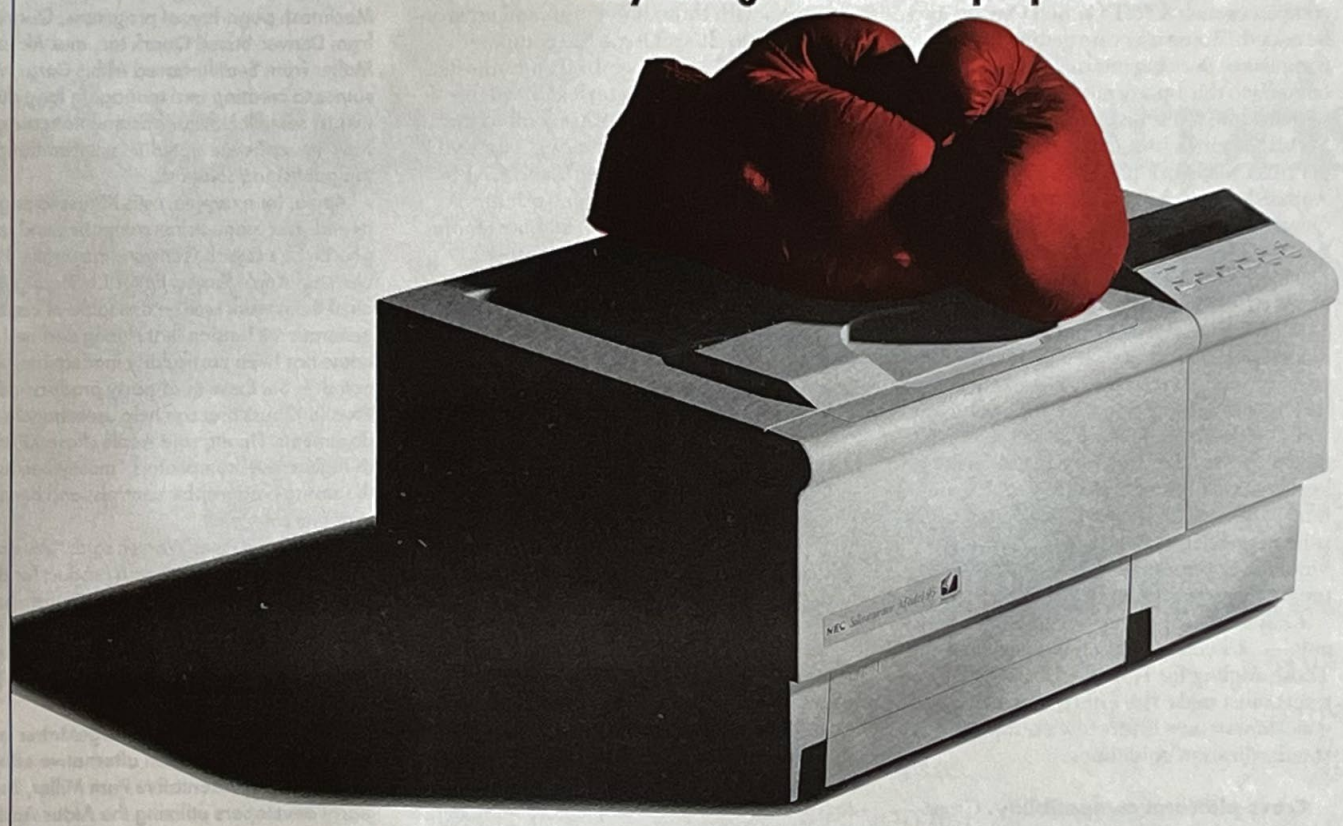

FEATURES	Apple Personal Laserwriter NT	T.I. microLaser PS 35	QMS PS 410	GCC BLP Elite	NEC Model 95
PostScript Language Level 2	No	No	No	No	Yes
LaserJet III Emulation (PCL5)	No/PCL4	No/PCL4	No/PCL4	N/A	Yes/PCL5
Automatic Interface Switching	No	No	Yes	No	Yes
Enhanced Resolution Technology	No	No	No	No	Yes
Envelope Feeder & Cassette	No	No	No	No	Yes
True Laser Technology	Yes	Yes	Yes	No	Yes
Suggested List Price	$2595	$1849	$2395	$1599	$1749

For more information, dial 1-800-NEC-INFO. For immediate information via fax, call NEC FastFacts at 1-800-366-0476 and request #SWM95.

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C&C Computers and Communications

What standards fall under the CALS umbrella?

Computer-aided Acquisition and Logistic Support is a set of standards chosen by a Department of Defense committee for use by defense contractors and subcontractors in its quest for a completely paperless documentation system. If some of their names sound familiar, it's because most are simply variations on standards already popular among private-sector computer users. Standards under the CALS umbrella include:

- **CALS Group 4 Facsimile.** A raster imaging standard for communications based on CCITT Group 4 Facsimile.
- **CGM (Computer Graphics Metafile).** A platform-independent graphics interchange standard that describes both vector and raster objects primarily used for workstations, mainframes and IBM PCs and compatibles.
- **IGES (Initial Graphic Exchange Specification).** A graphics interchange standard generally used for CAD documents.
- **MIL-STD 1840A.** An interchange standard for files stored on magnetic tape.
- **SGML (Standard Generalized Markup Language).** A standard for interchanging text via tags embedded within a document that describe its content.

Additional standards are added as the Defense Department investigates and approves new technologies. The next one to be included likely will be an interchange standard for files stored on CD-ROM. — By Mitzi Waltz

Technical

From Page 32

FrameMaker's advantage comes from its built-in hypertext system, which Feliciano said he hopes to use with Apple events and multimedia applications, such as HyperCard, to some day build links between documentation and courseware. "We're doing a little experimentation with putting manuals online in a prototype," he said, adding that although he sees interactive technical documentation as the wave of the future, it's not yet cost-effective.

Government issue. A more current issue for many documentation makers is compliance with CALS (Computer-aided Acquisition and Logistic Support), a set of standards for Department of Defense contractors and subcontractors. Standard Generalized Markup Language (SGML) is one of several standards under the CALS umbrella (see story, this page) and has been independently adopted by many multinational corporations. However, FrameMaker, Interleaf Publisher and Ventura Publisher are not compatible with either standard on the Macintosh, a situation that all three vendors said they are trying to address as soon as possible.

Making sure contractors are using the same standards for communicating and processing information is a top Pentagon priority, said Defense Department spokesman Glen Flood. "Where possible, we use existing standards, but some of the [business-world] standards just won't work with the types of things the military is involved with, such as weapons systems," he said.

"[The Defense Department] is basically just trying to get everyone singing from the same hymnbook with CALS," said Ventura Corporate Account Manager Tom Koedding, who is researching the standards-compliance needs of his company's larger customers. There's a crying need for SGML-compliant products at companies such AT&T Co. and Oracle Corp., he added. "Some users are getting SGML compliance by doing internal [programming] or going to third-party products," Koedding said. Add-on solutions include the $39.95 SGML Instance Imager or Context-Wise Tagger from New York-based US Linx; the $495 Author/Editor 1.1 from Toronto-based SoftQuad Inc.; and FastTAG, a $2,450 to $3,100 package from Boulder, Colo.'s, Avalanche Development. FastTAG, however, is not available for the Macintosh.

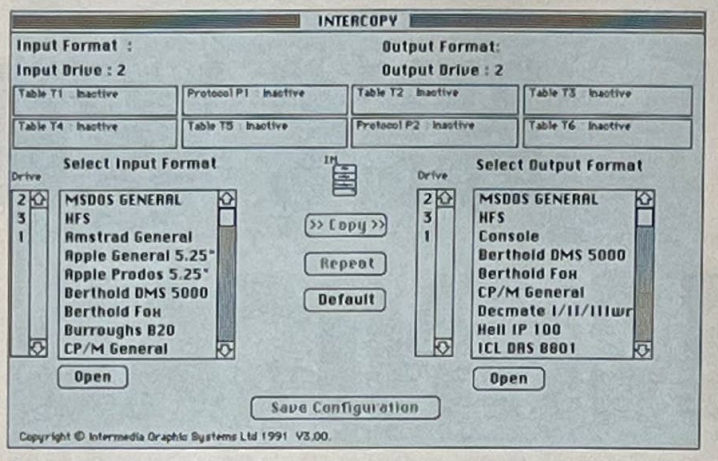
SGML allows users to embed field-tag names within a text file. "It lends itself to database use, and you can easily move into hypertext," explained US Linx Vice President Scott Kelly. SGML tags define the information's meaning only, allowing users to independently key these definitions to a variety of style definitions. The result: a product description might print in booklet, manual or fax-transmission format or appear on screen in a style configured for your particular display.

Kelly said keeping up with CALS is difficult — "it's continually changing," he said. Those angling for Defense Department contracts must make the effort, however, as the government now offers few exemptions to its standardization guidelines.

Cross-platform compatibility. Cross-platform compatibility is key for Debbie Pavletich, graphics services supervisor at Briggs & Stratton Corp., an engine manufacturer in Wauwatosa, Wis. Her department creates 90- to 300-page repair manuals on a TOPS-based network that includes Macintoshes and Sun workstations using software from Interleaf.

MICHAEL KRONTZ/PICTURE GROUP

Debbie Pavletich is graphics services supervisor at Briggs & Stratton, an engine manufacturer. Her department creates 90- to 300-page repair manuals.



With ContextWise dialog, which allows SGML compliance, users can convert one document format to another. With the table and protocol options, users can translate sophisticated multistring codes to SGML tags.

Interleaf began its foray into technical publishing on engineering workstations, later porting its product to Macintoshes and IBM PCs and compatibles as Interleaf Publisher. Unfortunately, even Interleaf admits its proprietary interface has too much in common with those line-command environments of old. It's an issue the company hopes will soon go away: In six months its workstation product, Interleaf 5, will be available for the Macintosh. It will follow the Mac's interface guidelines at last, and it also will include full System 7 and CALS compliance, Interleaf's object-oriented development environment, and new table-generation features. It will also offer a "smart" documents approach that will let users program some artificial intelligence into their documents.

"The Department of Defense is basically just trying to get everyone singing from the same hymnbook with CALS."
— Tom Koedding

For now, Pavletich is using Interleaf Publisher 3.6, priced at $995, on her Macs. It's a text- and graphics-driven program that allows few fancy design options for individual pages, but it has strong editing tools and a multitude of management features to automate projects, she said. There is one problem, however. Because the current Sun version is more advanced than the Mac version, she said, it's hard to pass information from the Sun to the Mac. She cited automatic repagination and graphics capabilities as Interleaf Publisher's best features.

Interleaf has cross-platform company, of course. There are versions of Ventura Publisher for systems running DOS/GEM, Windows or OS/2; and FrameMaker is available for machines from Digital Equipment Corp., Hewlett-Packard Co., IBM Corp., Sun Microsystems Inc. and NeXT Computer Inc. as well as the Mac, supporting a variety of operating systems.

This year should see these Macintosh products approaching or meeting their workstation cousins in functionality and consequently working more closely with them, according to BIS' Churchill. "You're looking at a really varied environment for technical-document producers — workstations for engineers, PCs and Macs in publishing," she said. "We're now seeing a greater focus on merging the 'publishing' and 'tech' sides." □

Turning to traditional tools

Although the specialized features of publishing software from Interleaf Inc., Ventura Software Inc. and Frame Technology Corp. give those products an edge over the two leading Macintosh page-layout programs, QuarkXPress from Denver-based Quark Inc. and Aldus PageMaker from Seattle-based Aldus Corp., when it comes to creating and managing long documents, some technical-documentation experts have nevertheless opted to use traditional desktop publishing solutions.

Apple, for example, uses XPress to paginate its end-user manuals for computers and peripherals. It's QuarkXTensions that make it possible, said Apple Project Editor Chi Huang. Not all of them work well — one table-of-contents-generation XTension that Huang declined to name has been particularly inadequate, she noted — but these third-party products add functions to XPress that can help users handle longer documents. Huang said Apple chose XPress over its higher-level competitors "mostly because of the strong typographic controls, and because it supports color well."

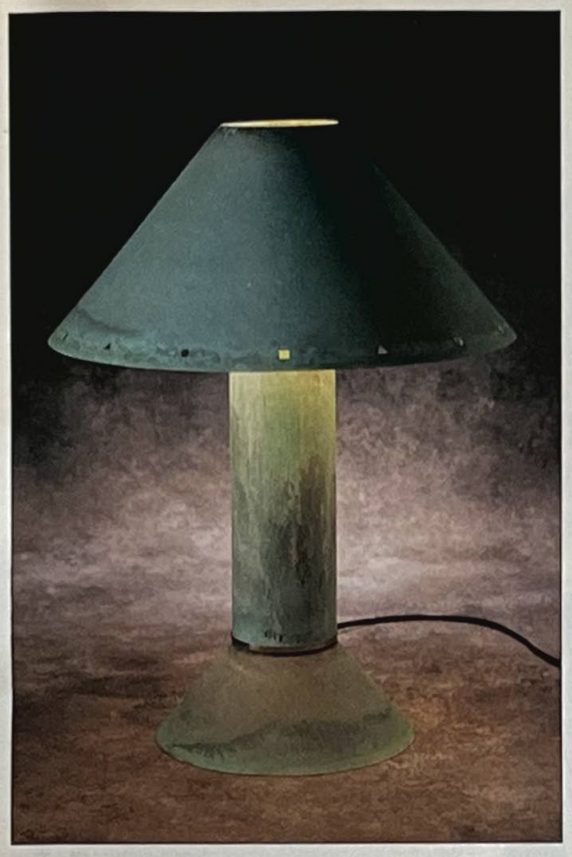
But Quark's Peter Warren said: "We don't really position ourselves as a product for doing technical documentation. It's a program for people doing graphics-intensive, color-intensive layouts. People who are doing lots of tables and lists will probably want to use [something like] FrameMaker."

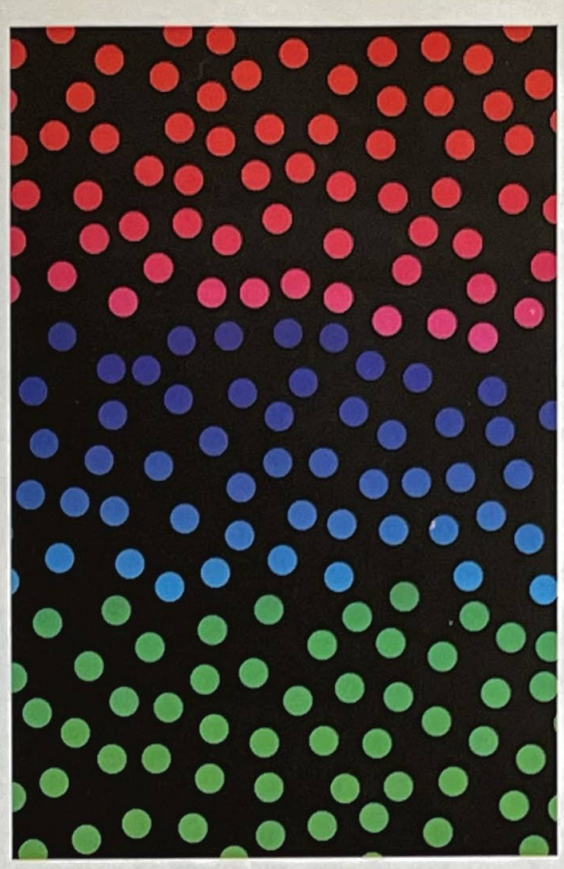
Aldus hasn't positioned PageMaker as a technical-documentation alternative either, said Aldus representative Pam Miller, but third-party developers utilizing the Aldus Additions technology incorporated in PageMaker 4.2 may bring more features of interest to long-document publishers.

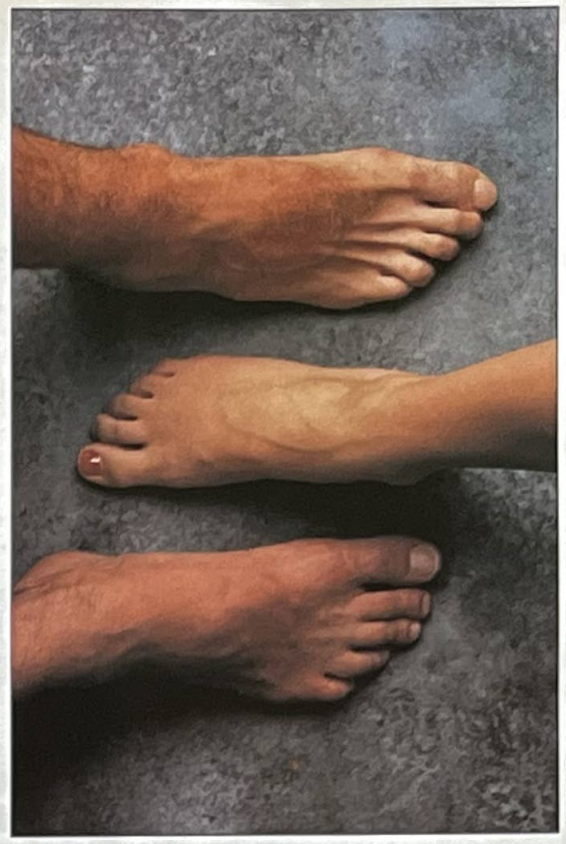
At Amherst, N.H.-based Datalex Corp., Keith Thompson builds technically oriented books and directories with PageMaker. "In the current version, Aldus has addressed a lot of the program's shortcomings," he said. "It works really well for what we're doing."

PageMaker now includes more-extensive indexing and table-of-contents options intended for laying out books, which Thompson said have been invaluable. Thompson said the most important new feature is "the ability to string together files so you can have chapters, with each chapter its own document." Thompson said he expects future Aldus Additions for features such as cross-indexing, one capability the program lacks.

A few technical-documentation experts opt for even simpler solutions. Visual Integration's Evelyn Alemanni said she's a big fan of Microsoft Word for documents that are mostly text. "It's easier than Ventura Publisher, although Ventura has more formatting and control features," she said. Alemanni bases her choice of application on whether a document needs spot-color separation, careful kerning and leading or graphics created within the program. — By Mitzi Waltz







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In-house

From Page 32

Up to now, proving itself to cost-conscious clients and lone-wolf engineers alike has meant maintaining a highly flexible system that can accommodate an endless progression of technical and aesthetic requirements. Although system planners recognize the benefits of standardized systems, so far they have avoided settling on a single document-management system.

Macs by choice. Although Bechtel as a whole has standardized on DOS-based machines, MCS has been given a fair amount of autonomy in designing its own systems. And the bulk of the department's work is done on the Macintosh — of MCS' 62 workstations, 49 are Macs — because the Mac still leads in electronic-publishing applications, and most electronic-publishing professionals know the Macintosh.

The current configuration — upgraded only three years ago from a Wang system — includes Macs connected to LaserWriters and scanners over an AppleTalk network; a collection of optical disk drives; a Linotronic 330 imagesetter; a Varityper VT660W laser printer; a QMS ColorScript printer; an Iris color printer; a stand-alone Genigraphics film recorder; and an on-site reprographics department equipped with color copiers. The department uses outside printers for offset printing and service bureaus for outputting slides created on the Macintosh.

Right software for the job. Within this framework, MCS has developed what might seem like a software hodgepodge, but system planners call it a "customized component system" composed of applications for writing and editing, page design, illustrating, presentation graphics, 3-D and CAD drawing, and photo retouching, as well as a collection of utilities.

Add to this a series of specialized programs required by the needs of particular jobs: a Ventura Publisher package, for example, because the Air Force required it for one three-month project, according to Anne Rousseau, electronic-publishing manager.

"We have customers saying, 'You're intimidating because you have so many capabilities,'" said Robin Sinclair, presentation graphics supervisor and systems planner.

For most of those 500 jobs, however, the workhorse is Microsoft Word. "For long engineering reports, the presentation isn't as important," Losh said. "You don't want to spend any more time than you need to."

But for those big projects that have won the department a series of awards and the company a series of contracts, the department needs all those software bells and whistles.

The raison d'être for the extensive application library is flexibility. With each aspect of a project being created in specialized software, projects can be broken into component pieces. This way several staffers can be kept working simultaneously, an efficiency measure demanded by the peak-and-valley workload.

It also means that each component — text, maps, photos, cover illustration — has the highest quality possible instead of the highest quality available from a standard system.

"We want to create something, the Bechtel logo for instance, one time and cross platforms with it. The group will work, and does work, on any platform," Nuckols said.

The PC-to-Mac gap is largely bridged by Apple File Exchange, though compatibility problems arise. CAD drawings complete with technical notes are critical to many Bechtel proposals, but when imported into publishing software, often show up incomplete or garbled.

"It's one of our major frustrations," Sinclair said.

But the department's single biggest challenge, one might even say nightmare, is revision control, according to Losh. Since the company doesn't run on a standardized system, clients will drop off their own hard copy and disks. "They'll say, 'It should all be on this disk,'" Losh said. "Those are the words that send ice water down my spine."

What is on the disk is often not what the hard copy indicates it should be. The missing material must then be hunted down or recreated by MCS. Once compiled, someone must keep track of the document as it makes its way through the maze of MCS cubicles, where as many as 10 people may by working on it at any one time.

Either a dedicated document-management system or a page-layout application with extensive document-management capabilities could take care of the revision control problems and bring an end to their handwritten logs. In fact, system managers at MCS keep a running evaluation of Frame Technology Corp.'s FrameMaker, Interleaf Inc.'s Interleaf 5 and the Odesta Document Management System.

"But every time we come close to using FrameMaker, Quark comes out with a new release," Sinclair said. □

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Mac saves marketing money

By Emily Kay

From sportswear manufacturers to daily newspapers, in-house artists and designers are using Macintosh technology to create slick marketing tools while realizing substantial savings in time and money.

Sport Obermeyer Ltd. invested $80,000 in Macintosh equipment to pump out posters, billboards, an array of point-of-purchase displays and a 24-page brochure in four colors, said Biege Jones, art director with the Aspen, Colo., skiwear manufacturer.

"We've actualized $300,000 in savings in the past year in my department because we used to do things traditionally, such as pasting and keylining," Jones said. "Macs have significantly changed our cost structure, which helps the bottom line."

Internal production of one- and two-color fliers and newsletters saved 3M Health Care's marketing arm $41,000 last year, said Tony Graves, marketing communications development manager with the St. Paul, Minn., business unit of 3M Co.

Macs have helped boost productivity dramatically as well, Jones said. Two catalogs that took 40 people three months to complete are now done by two staffers in one-third the time. Jones' department also makes some $30,000 a year producing materials for other companies.

Good for newspapers. The Mac has enabled Edward Huff, art director in sales and promotion with the Providence (R.I.) Journal Bulletin, to save considerable time and personnel. Traditional newspaper advertising departments separate design from production, with several designers needed to input type, design the ad, assemble typographic elements, shoot photos of the artwork and paste everything together, Huff said.

The Journal Bulletin uses fewer designers, who do all their work on Macs. "Since [we design] on the Mac, our only production is Command-P, which saves a tremendous amount of time," Huff said.

Huff credited Macs with the success of a new product called Single Sheet, an 8.5-by-11-inch insert that lets advertisers print one or two colors on one or both sides.

With a one-hour turnaround goal, designers use QuarkXPress on Mac IIcx machines and full-color double-page monitors. Advertisers request one of 12 templates, and designers import graphics from Aldus FreeHand and Adobe Illustrator into XPress via an Apple CD-ROM or Hewlett-Packard ScanJet Plus scanner. A LaserWriter IINTX prints proofs. Advertisers approve or send them back for changes, and designers complete work the next day.

From the Mac, PostScript files go to a Sun SPARCstation where they are converted to a Harris printer format for the company's 386-based proprietary pagination system. The files proceed to an Autologics APS6 typesetter for final output. Depending on the companywide load, designs are printed on an in-house two-color press or sent out.

Only a few months old, Single Sheet is selling well. "This is a brand-new product to the industry," Huff said. "There are a lot of ways to get free-standing inserts into a newspaper, but this manner is brand-new to us. I don't think it could be done as expediently [without the Mac] because the designer is doing the final output."

Point-of-sale. For color productions, marketing divisions such as Sutter Home Winery's rely largely on XPress and Adobe Illustrator and Photoshop.

Last summer's "Build a Better Burger" point-of-sale promo was designed to link the company's wine with the idea of outdoor cooking, said Robert Celsi, director of marketing support with the St. Helena, Calif., winery. On a four- to six-week deadline and needing to incorporate many changes along the way, Celsi produced a glossy, four-color brochure to sell the promo to retailers.

Idea generation began manually, "from fingertips to magic markers," Celsi said. "As wonderful as Macs are, they are still a tool, like an X-acto knife or rubber cement. There's a great danger to having technology dictate design."

After choosing the format, designers produced the layout on Mac IIfx, IIci, IIsi and Classic machines while the public relations department wrote copy, which designers poured into XPress documents.

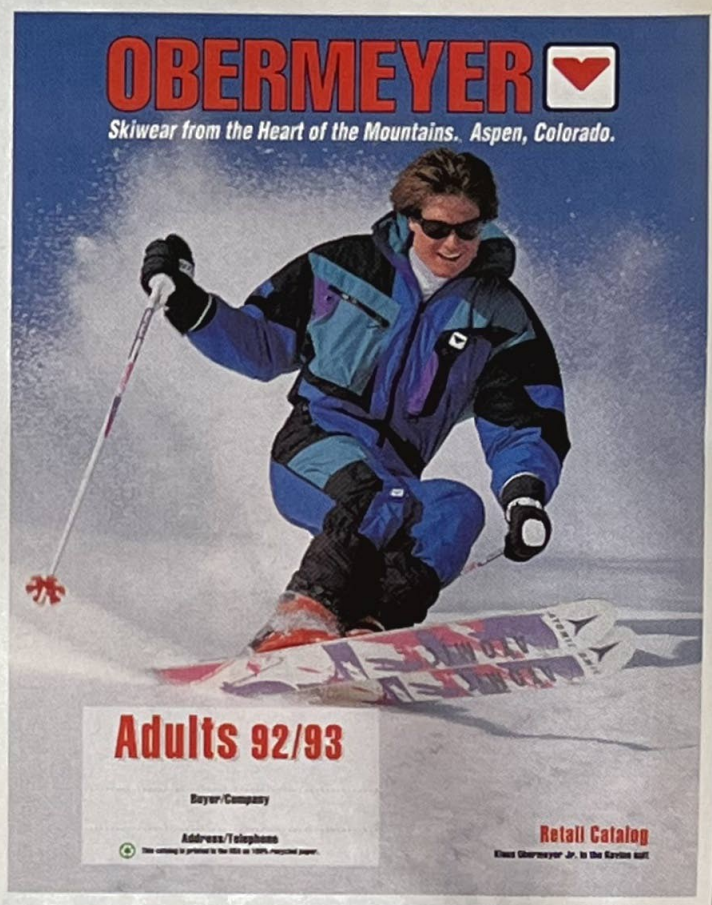
Following a photo shoot, designers used a Sharp JX450 color scanner and Chromascan to scan photos into Photoshop, where they some touched up the pictures and placed the completed photo file into XPress. Because the wine color must be exact, Celsi said he sometimes sends pieces to an outside company for retouching. Separations are done out of house.

At Sport Obermeyer, designers run Photoshop 2.0, XPress 3.0 and Illustrator 3.01 on Mac II and Mac IIfx machines.

However, what they're working with in Photoshop (as in the case of their catalog cover) is a high-resolution scan from a Crosfield, saved as a Scitex CT file. They manipulate this image as they would any other, then save it as a five-file separated DCS file and place it in XPress. They send this file for high-end output to machines such as a Varityper 5000 imagesetter or a RayStar Film Plotter.

What do you save? Internal production is cost-effective up to a point. According to

See Marketing, Page 40



Biege Jones, art director for skiwear manufacturer Sport Obermeyer, scanned this photograph for the cover of its 1992-93 catalog on a Crosfield scanner and brought it into Adobe Photoshop. The type was designed in QuarkXPress.

Esprit de Corp found in the graphics department

By Stacy Frederick

When it took Esprit de Corp Art Director Rip Georges 45 minutes to find an X-acto blade, he knew the graphics department's effort to embrace the Mac had been a success.

In less than a year, the clothing company, based in San Francisco, turned its graphics department into a Mac workshop. The eight-person team designs all of Esprit's marketing materials, national advertising, company support (postcards, hangtags, stationery, invitations), T-shirt logos, labels, direct customer catalogs and in-store signage.

"It's easier to get up and operating in a shorter period of time with the Mac [than with other systems]," said Georges, who previously held leading design roles at Esquire, Mirabella and L.A. Style magazines.

Big savings. Responsible for introducing Macs to the graphics department was Image Director Neil Kraft, who was hired after Esprit's ownership shakeup, in which Suzy Tompkins won company control from ex-husband and co-owner Doug Tompkins in June 1990.

"I said I wasn't coming to Esprit unless we had Macs," Kraft said. Initially, "[Esprit's] chief financial officer didn't want to spend the money; he's an IBM guy. I think [the system] paid for itself in the first month we had it. Just in type bills alone we were spending more than $100,000 a year then." Current type bills are virtually nonexistent, Georges said.

Getting off the ground. Initially, Esprit brought training in-house. Now, people who have honed their skills train new employees, and Georges, who was trained on the Mac at Esprit, is adamant about hiring people who are Mac-savvy.

The graphics department operates with 12 Macs, a mixture of IIcx and IIci machines with 80-Mbyte or larger internal hard disks, nearly all sporting 8 Mbytes of RAM. All are equipped with 19-inch color monitors and a mixture of SyQuest 44-Mbyte and 88-Mbyte cartridge drives.

The department has been using Apple's LaserWriter IINTX and IIG; the thermal-transfer Tektronix 4693DX, used for color printing; and it just brought in a Canon Color Laser Copier (CLC) 500 with Electronics For Imaging Inc.'s Fiery PostScript controller. Occasionally, for special color work, Georges sends files to be printed on Silicon Graphics Inc.'s Iris inkjet printer.

See Esprit, Page 40

This photo, used as a promotional sale postcard, was scanned with Microtek's Lab ScanMaker 600ZS at 150 dpi for position only. The logo was imported as an EPS file, and the piece was sent to a high-end pre-press system.

Sutter Home Winery launched the "Build a Better Burger" campaign last summer. The image was scanned with Sharp's JX450 Color Scanner and imported to Photoshop for touch-ups.

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Marketing

From Page 38

Celsi, software technology for desktop color separation is almost available.

"At this point, we don't do separations on the Mac much at all, and for four-color separations, not at all," Celsi said. "The desktop capability is not here yet for the levels of resolution needed. The amount of memory needed for high-resolution separations is incredible. It's not economical to do it on the desktop."

Even designers who can tweak Photoshop expertly require others to do final color separation. For Colleen Gray, staff artist with the Morning News Tribune in Tacoma, Wash., that task will be eased soon when two Linotronic machines go on-line in her department.

On a Mac IIci with an E-Machines 16.5-inch color monitor, Gray uses Photoshop 2.0 to make an "infinite amount of changes," she said.

Gray's shop is rare in that most marketing departments can't afford to do color separations internally. But even if they could, most would choose not to.

"You have to decide how much you want to do in-house," Celsi said. "I'm not in the photo-separation business, and I don't want to pay my designers to do that either. It's a technical process, and if you only do it [occasionally], you won't be proficient at it. For high-end printing, I can't see photo separations in-house at any level."

Rocco Pawlowski, graphics and design manager with Amurol Products Co., a William Wrigley Co. company, agreed. "Separation is not the focus of my department,"

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Amurol Products Graphics and Design Manager Rocco Pawlowski created this Reed Sour Melon candy wrapper with Adobe Illustrator. He separated the file in Adobe Separator.

said Pawlowski, who designs packaging for Amurol's bubble gum and candy products. "I don't want my people to be so buried in the technical end that we don't have time to put into the creative end." □

Emily Kay is a free-lance writer based in Chelmsford, Mass., and a frequent contributor to MacWEEK.

Esprit

From Page 38

For scanning, Georges uses Microtek Lab Inc.'s 24-bit Lab ScanMaker 600ZS for color photos and artwork, and the four-bit Apple Scanner for black-and-white photos.

"We use what has become to be known in the industry as 'The Big Five,' " Georges said, referring to software on which his department depends: Aldus FreeHand 3.0, Adobe Photoshop 2.0 and Altsys Corp.'s Fontographer 3.3, QuarkXPress 3.1 and Adobe Illustrator 3.0.

In-house advantages. While Georges' department handles all phases of design, it sends files for film production to an imagesetter via modem or on disk.

His department is busy executing the "What Would You Do?" advertising campaign, recently shown in print and TV ads, which asks Esprit customers how they would change the world. The Courier-like typeface, originally from an antique typewriter, was digitized and sent to New York-based Tom Carnase Inc., who fine-tuned and streamlined it with Fontographer. Now, however, Georges said, they would do that job in-house.

"We have been able to get fairly sophisticated with Fontographer," Georges said. "Personalized typeface is much more accessible."

Esprit has more design control by having its staff in-house, Georges said. "We have something very particular in mind. People just need to be here to have the access [to the files]."

However, Georges said he is unsure whether the Mac actually speeds up production. With the Mac, "people tend to mess more [with their designs]," he said. "Before, mechanically, you would have to arrive at a solution and stick to it." But Georges is quick to add that a lot more fine-tuning takes place now, making for a superior end product.

"Technology has made it such that we can operate totally in-house — it just makes sense," he said. And by "working in-house, we're more dedicated to the company, because we're not diluted with other projects." □

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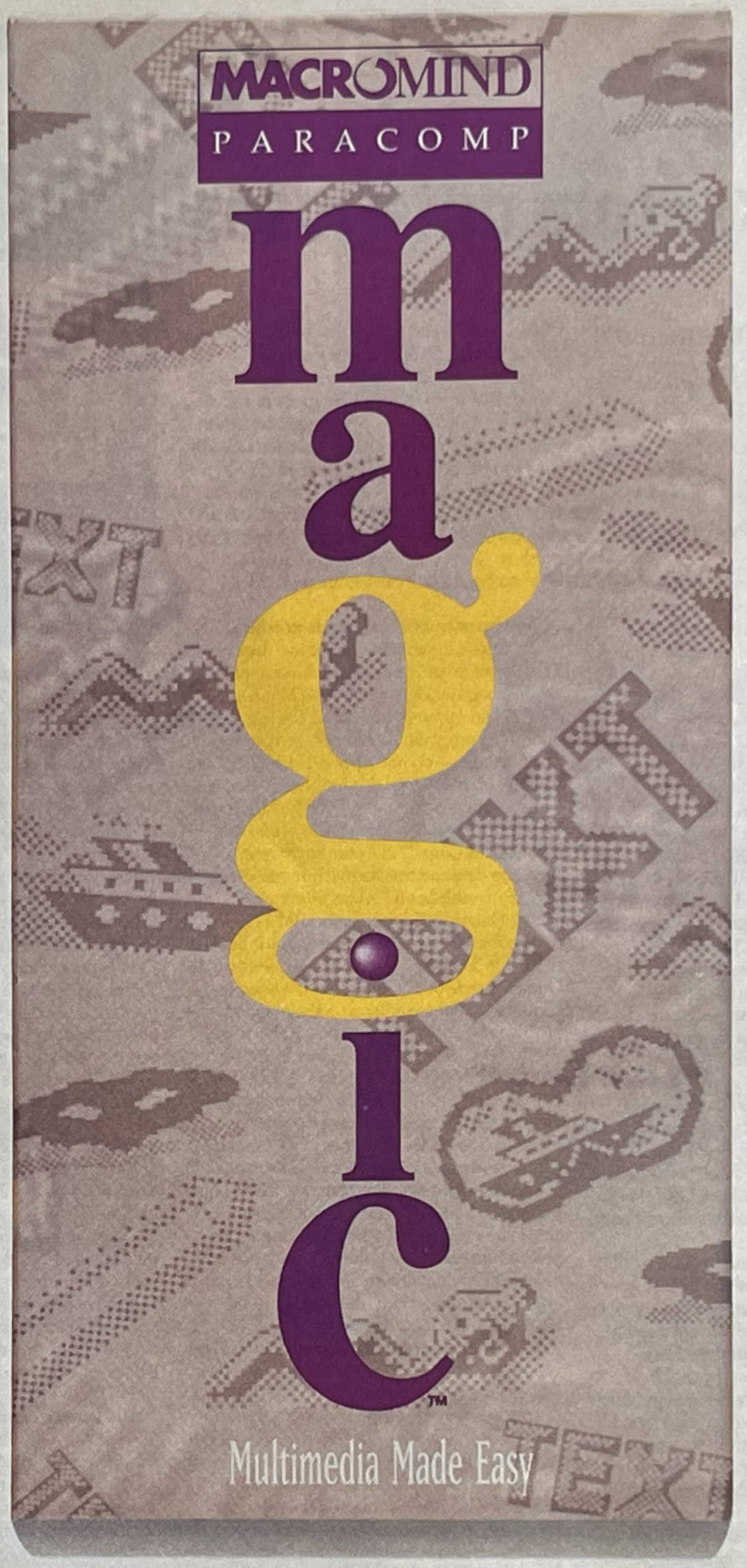

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Welcome to multimedia.

Creating books from databases

A wealth of information resides in innumerable databases. But there's still no smooth transition from database to page layout.

By John Battelle

Database publishing sounds like a contradiction in terms; who would ever want to publish the contents of a database? It'd make for quite a boring book, it seems.

That depends on your database. If it contains descriptions of and cross-references to just about every nude scene (rated G to R) ever put to video, the book may end up a best seller in its field. That's exactly what Craig Hosoda has done. The Santa Clara, Calif.-based author self-published "The Bare Facts Video Guide" ($10.95) in 1991. Using a database-publishing link between his ACIUS 4th Dimension database and Frame Technology Corp.'s FrameMaker publishing software, Hosoda is able to keep his 454-page book, which had been through three editions in Microsoft Word before switching to the new 4D format, updated and cross-referenced.

"One of the most asked for features of the book was a cross-reference by film title," Hosoda said. Since building cross-referenced indexes requires the power of a relational database, Hosoda brought the text into Cupertino, Calif.-based ACIUS Inc.'s 4D. He then hired a consultant to merge the new database with FrameMaker from San Jose, Calif.-based Frame. The result: a book that can be instantly updated and easily indexed.

While it may not make sense to put the full text of "Moby Dick" into database format, storing the contents of a data-intensive catalog such as Hosoda's "Bare Facts" gives almost infinite control over how the final product will look.

You can use the database's powerful sort functions to pinpoint what you want to publish and how it will look, including graphics files. If your database is linked directly to your publishing program, changes in your database will be instantly reflected in your publishing layout.

A new market, few products. But so far, database publishing isn't as easy as using a desktop publishing program or building a simple database. The options are few for people interested in combining these two applications. While most spreadsheets now support links to databases, they are set up to produce one-hit presentations, not book-length catalogs. "I defy you to publish a catalog in Excel," said Lee Lensky, president and CEO of CoRelation Inc., a start-up in Foster City, Calif., that is in the process of perfecting a database-publishing product. "It's not a publishing product — it can be stretched to be a presentation product."

Database publishing holds promise. And while Apple's System 7 promises live database links between various System 7-savvy applications through its Database Access Manager (DAM) and Apple-events hooks, the two major publishing programs — Aldus PageMaker and QuarkXPress — do not support DAM.

"People have solved this problem in the past with custom programming," said Dave Roberts, director of PageMaker marketing for Seattle-based Aldus Corp. "[The custom program] reads the data and translates it into something else, then publishes it." Aldus offers a PageMaker Database Edition for its IBM PC and compatible version, but even that link is limited to flat-file databases, not relational ones such as Omnis, Oracle or 4D. Aldus has not announced plans for a database edition on the Mac. "It will be driven by customer demand," Roberts said.

However, Seattle-based Elsewhere Corp. offers Macintosh DataShaper 1.2, a $179.95 PageMaker import filter that automatically formats text coming in from a database.

Quark Inc. of Denver does offer a database connection of sorts, through its XTensions library of third-party applications. XData 2.0 is a $299.95 add-on utility that allows you to automate catalog and other data-intensive production tasks, but it doesn't maintain hot links with live databases. Instead, you must import a tab-delimited file each time you want to update the document.

Setting up a hot-linked database-publishing system still requires some serious homework and custom programming. The ACIUS-Frame link was developed by ACIUS to simplify the publication of its 800-page developer's guide. It requires a working knowledge of Frame's Maker Markup Language and, of course, knowledge of the ACIUS database environment. Other database products with impressive layout and publishing capabilities — most notably Blyth Software Inc.'s Omnis 7 and Odesta Corp.'s Double Helix-based Document Management System — also require major learning investments.

A new gem? CoRelation's Lensky hopes to change all of this with Sapphire, which will incorporate sophisticated page-layout features with live hooks to mainframe, mini and PC-based databases, regardless of where they are on the network (see MacWEEK, Dec. 3, 1991). "Database users don't have any way of automating the publishing process," Lensky said. "We are building a ground-up application that remembers the links" between the catalog layout and the database in which the catalog's contents are stored.

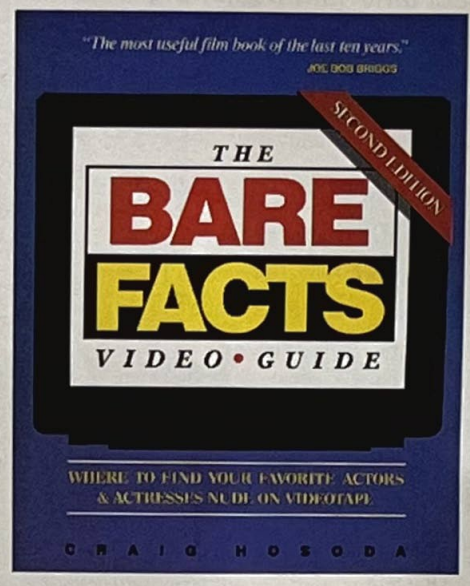
Due by year-end, Sapphire will include database functions such as browse, sort and index, as well as standard layout functions, such as rotation, spot color, fine typography controls and graphics support. It will be capable of hooking into Apple's Data Access Language (DAL) and DAM; System 7's Apple events; Microsoft's Dynamic Data Exchange (DDE); and most SQL-based databases, regardless of platform.

The ability to combine many sources of data into one formatted layout has some information managers excited. "I would like to access multiple databases, combine them and print them out in a format I want," said Keith Sproul, microcomputer manager at Union Carbide in Bound Brook, N.J. Sproul said Sapphire would be especially helpful in publishing the reams of chemical-safety data sheets required by the Occupational Safety and Health Administration.

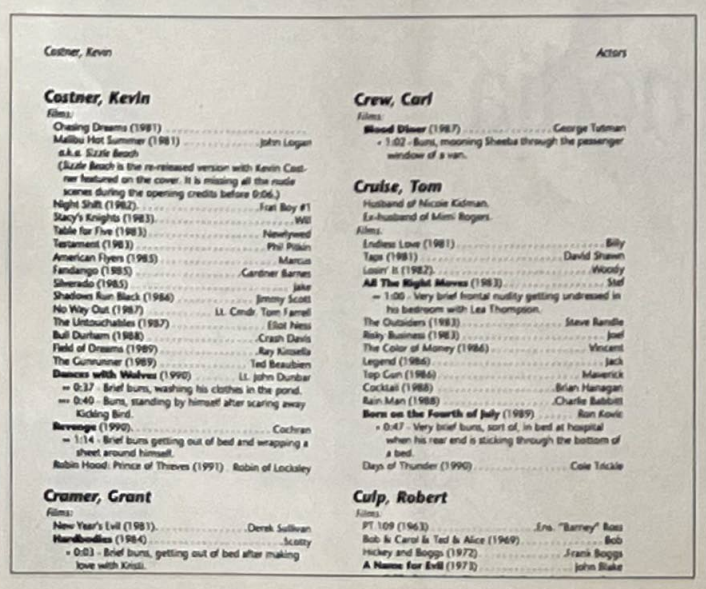
But not everyone is convinced an integrated package is the right way to go. System 7 is built on a philosophy of specialized programs doing one task well, then communicating openly with each other to perform integrated work such as database publishing, said Dennis Marshall, FileMaker product manager at Claris Corp. of Santa Clara, Calif. By the time Sapphire ships, publishing standbys such as XPress and PageMaker may be System 7-savvy, as will databases such as 4D, Omnis and FileMaker.

"The question [for buyers of database-publishing software] will be 'Am I buying a replacement for my publishing program just so I can have database functionality?' " Marshall said. "All of the database vendors on the Mac side are in the process of incorporating Apple events into their products."

The bottom line. Until more programs get System 7 savvy, or until Sapphire ships, users looking for full-blown database-publishing solutions will have to learn both environments or hire a consultant, which will cost you. Once set up, however, you may never need another system. For Craig Hosoda, updating his book is as simple as watching another video, updating a few fields in a database and pressing Print. All of which has proven good for the book's bottom line, so to speak. □



"The Bare Facts Video Guide" by Craig Hosoda is the merging of a 4D database into FrameMaker.



Costner, Kevin — Actors

Costner, Kevin
Films:
Chasing Dreams (1981)
Malibu Hot Summer (1981) ..... John Logan
a.k.a. Sizzle Beach
(Sizzle Beach is the re-released version with Kevin Costner featured on the cover. It is missing all the nude scenes during the opening credits before 9:06.)
Night Shift (1982) ..... Frat Boy #1
Stacy's Knights (1983) ..... Will
Table for Five (1983) ..... Newlywed
Testament (1983) ..... Phil Pitkin
American Flyers (1985) ..... Marcus
Fandango (1985) ..... Gardner Barnes
Silverado (1985) ..... Jake
Shadows Run Black (1986) ..... Jimmy Scott
No Way Out (1987) ..... Lt. Cmdr. Tom Farrell
The Untouchables (1987) ..... Eliot Ness
Bull Durham (1988) ..... Crash Davis
Field of Dreams (1989) ..... Ray Kinsella
The Gunrunner (1989) ..... Ted Beaubien
Dances with Wolves (1990) ..... Lt. John Dunbar
- 0:37 - Brief buns, washing his clothes in the pond.
- 0:40 - Buns, standing by himself after scaring away Kicking Bird.
Revenge (1990) ..... Cochran
- 1:14 - Brief buns getting out of bed and wrapping a sheet around himself.
Robin Hood: Prince of Thieves (1991) ..... Robin of Locksley

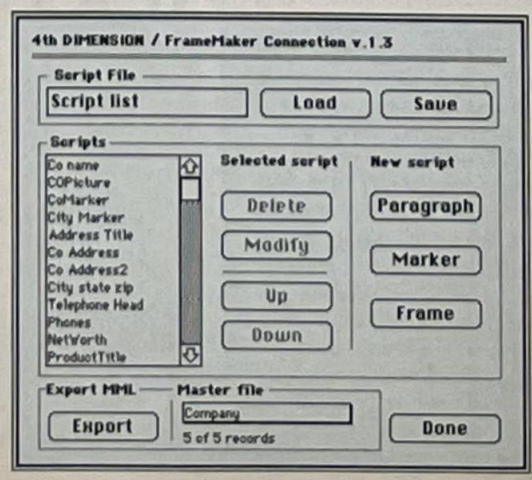
Cramer, Grant
Films:
New Year's Evil (1981) ..... Derek Sullivan
Hardbodies (1984) ..... Scotty
- 0:03 - Brief buns, getting out of bed after making love with Kristi.

Crew, Carl
Films:
Blood Diner (1987) ..... George Tutman
- 1:02 - Buns, mooning Sheeba through the passenger window of a van.

Cruise, Tom
Husband of Nicole Kidman.
Ex-husband of Mimi Rogers.
Films:
Endless Love (1981) ..... Billy
Taps (1981) ..... David Shawen
Losin' It (1982) ..... Woody
All The Right Moves (1983) ..... Stef
- 1:00 - Very brief frontal nudity getting undressed in his bedroom with Lea Thompson.
The Outsiders (1983) ..... Steve Randle
Risky Business (1983) ..... Joel
The Color of Money (1986) ..... Vincent
Legend (1986) ..... Jack
Top Gun (1986) ..... Maverick
Cocktail (1988) ..... Brian Flanagan
Rain Man (1988) ..... Charlie Babbitt
Born on the Fourth of July (1989) ..... Ron Kovic
- 0:47 - Very brief buns, sort of, in bed at hospital when his rear end is sticking through the bottom of a bed.
Days of Thunder (1990) ..... Cole Trickle

Culp, Robert
Films:
PT 109 (1963) ..... Ens. "Barney" Ross
Bob & Carol & Ted & Alice (1969) ..... Bob
Hickey and Boggs (1972) ..... Frank Boggs
A Name for Evil (1973) ..... John Blake

Originally, "Bare Facts" author Hosoda prepared his text in Microsoft Word. Demand for cross-referencing by film title made him decide to bring all text into ACIUS' 4D.



This 4D macro creates scripts that automatically mark up database information for import into FrameMaker.

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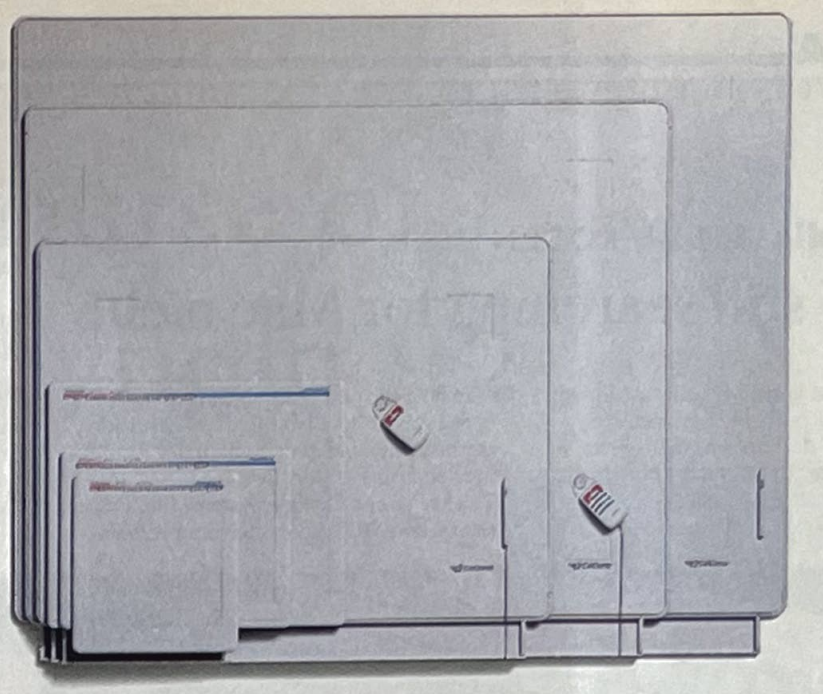

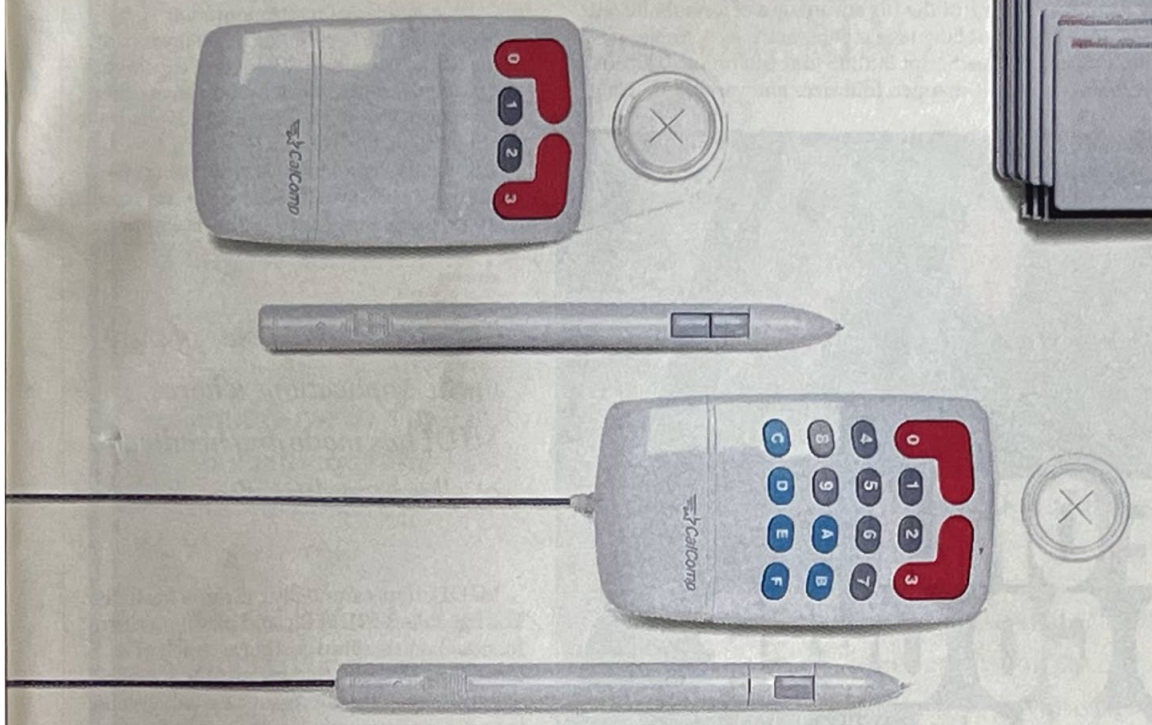

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New Media STEVE ROSENTHAL

MIDI still searching for Mac niche

In the world at large, Musical Instrument Digital Interface probably can match the PostScript page-description language for fame and fortune. But when it comes to the Mac, MIDI remains a specialty item, whereas PostScript has become a ubiquitous standard.

In fact, the only place outside of pure music applications where MIDI has made any headway at all is in multimedia. Applications such as Passport Designs Inc.'s Master Tracks Pro and Opcode Systems Inc.'s Vision let you add MIDI scores to your presentations, as will a growing number of forthcoming QuickTime-based products.

But if you look at the similarities between MIDI and PostScript, MIDI ought to be playing an even greater role.

Let's start with the need for compact representation. As anyone with a large bit-mapped font collection knows all too well, one of the big advantages of a symbolic output language is compactness. A single PostScript outline font can replace dozens of bit-mapped font sizes and variations, using up far less memory or disk space.

Similarly, if you've been adding acoustic accompaniment to your presentations, you know that even in compressed form, waveform-style audio also gobbles up huge amounts of storage space. But a short MIDI file can represent long periods of music; the same music is a number of keys or one melody in a range of instrumentation.

Separating the description of what we want to see on the page from the specific capabilities of a particular output device has been another of PostScript's strong selling points. If you want the highest quality, you can play out a PostScript file on a $100,000 typesetting system. But you can take that same file and get a quite workable image on a $2,000 laser printer.

The only place outside of pure music applications where MIDI has made any headway at all is in multimedia.

MIDI offers essentially the same flexibility. You can take a MIDI file and play it on a professional music setup costing as much or more than a typesetting system. Or, if you're willing to drop the more-subtle shadings and lesser voices, you can play that same file on a $100 music keyboard you get from the neighborhood discount-department store. Or for an add-software-only solution, you can use a program such as Opcode's MIDI Player to render that file as notes from the built-in speaker on the Mac.

While most PostScript files go from the application that generates them to the printer without direct intervention by the user, if you are a print or page hacker and are so inclined, you can directly edit PostScript files. And because they're symbolic rather than direct bit equivalents, you can make major changes in the result by changing only a few crucial characters.

More commonly, if you're not a code hacker, you can apply a range of symbolic manipulation tools to the file, ranging from those in Postcraft International's Type FX to Adobe Illustrator.

MIDI files are also editable. Again, if you're a true code hacker, you can open a file directly and make changes to a few selected items. But if you're not, you can call on tools found in sequencer programs or MIDI editors.

The relationship of fonts to language is probably the one area where PostScript does have a decided advantage over MIDI. Fonts carry the same type of emotional overtones you might find in music, but at the same time they directly represent language.

In MIDI, we do have "patches" (acoustic configurations) for coloration, notes and rests, out of which to construct melodies. But that's only the sonic equivalent of graphics. So far, we don't have any good way to represent narration and other linguistic information.

So maybe language is what MIDI needs if it's to gain its rightful place among interface standards. Establishing a standard representation for spoken language wouldn't be easy, given the subtleties in speech and the importance of context. But multimedia is going to have a hard time speaking to our needs if it has to do it merely a bit at a time. □

Send tips and comments to Steve Rosenthal, c/o MacWEEK, 301 Howard St., 15th Floor, San Francisco, Calif. 94105; AppleLink: Steve.R; MCI: 114-8611.

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EDITORIAL

Loading software more than a drag

Once upon a time, loading software onto your Mac was a simple matter of dragging an icon to your hard disk. "Installing," in those days, was something DOS users did.

No more. Now system-software updates and major applications include dozens of files spread over three, four or more floppies, and in many cases they need to be decompressed and installed in precise locations on the destination drive.

To shield users from such details, Apple and third-party developers routinely provide installer utilities on their master disks.

The concept makes sense, but the implementation has fallen short. Under the banner of simplification, these installer programs often force users to adapt to their quirks and rigidities:

- Application installers typically clutter the root directory with the folders they create, instead of letting users choose where non-system files should be placed.
- Applications impose arbitrary requirements. You can't install Microsoft Word 5.0 on a volume without a System folder, unless you know how to run two separate custom installations. Salient Software Inc.'s DiskDoubler installer puts an application into your System folder; if you move it, the extension won't work.
- Few packages document just what their installer scripts do. Even fewer include a Remove button. That makes reversing an installation into a shell game.

The latest indignity is the disk-image format Apple has used for distributing recent system-software updates. But image files are useless without an obscure, scarcely documented Apple utility that isn't even part of System 7 upgrade packages.

This violates one of the cardinal principles of the Mac interface articulated in the first pages of Apple's guidelines: "Users want to feel that they are in charge of the computer's actions. ... Too often ... the computer 'takes care' of the user, offering only those alternatives that are judged 'good' for the user or that 'protect' the user from detailed deliberations. On the surface, the concept ... may seem quite appealing, but this approach puts the computer, rather than the user, in the driving role."

Installers are a necessity and should be a convenience. But Apple and its developers need to rethink the way these utilities work to make sure the user gets the driver's seat. □

4 years ago in MacWEEK

Feb. 16, 1988: Apple settles on an active-matrix LCD screen for its upcoming portable Macintosh.

In retrospect: This choice of screen technology was partially responsible for the original Mac Portable's relatively high price. PowerBook 170 users are still enjoying the benefits of active-matrix LCD screens.

Letters

Is Apple's Classic II the dead-end Mac ?

The rather lackluster sales of the Mac Classic II is no mystery to me.

System 7 is a big deal with many in the potential Classic II audience, but many members of this audience are taking to heart the hype about System 7's needing a lot of memory for all its features to work properly. They may be confused about the Classic II's memory-expansion capabilities by the minimal memory configurations Apple has been offering.

Also, Apple marketing has done very little to dispel the understandable hunch that the Classic II, while better than a Plus or a Classic, is not as good as the Mac SE/30. As a result, the other members of the Mac product line are considered better deals.

In addition, most of the other Macs in the lineup reflect a great deal more innovation; the Classic II is perceived as a rework of last year's model.

And anyone with any experience with previous Apple products, particularly the Apple II, knows that Apple is a future-oriented company that doesn't give a hoot about the buyers of its older machines.

Who wants to buy a machine for which Apple will provide no upgrade path?

Stanley B. Hooper
Newport, Minn.

There may be several reasons for the Classic II's laggardly sales performance, but Apple's upgrade policy isn't one of them.

Sure, you can't upgrade a Macintosh Plus to a IIfx or a Quadra, but Apple has a good record of providing an upgrade path for users of current models of its computers. — Ed.

Consultants important in corporate equation

The recent series of letters (MacWEEK, Dec. 10, 1991, Jan. 13 and Jan. 27) about Apple and Mac consultants prompts me, a former Mac consultant, to comment from the perspective of a current member of corporate America.

Amgen, where I am currently employed as a manager, is a company moving rapidly into the ranks of the Fortune 500. As such, we depend on informed consultants to supplement our staff. Amgen currently uses consultants from many sources, including the Macintosh Consultants Network.

The value of consultants such as Barcot is not based on brief meetings with Apple product managers but rather on a consultant's review, testing and evaluation of new equipment and software releases over a meaningful period. Recommendations given after such a brief exposure as described by Kozuch and Bisaha would not be adequate for us. We cannot afford down time in our global network, and trial and error is not an effective means of meeting our users' requirements.

We've tried to have Apple include our consultants in the long-range briefings Apple gives us, but Apple balks. It has become apparent to us that Apple does not understand the value of consultants, nor does Apple appreciate the role consultants play in assisting Apple to penetrate the corporate market.

It is encouraging to me that programs such as Apple Consultant Relations, the Macintosh Consultants Network and MacIS are being supported by both vendors and users alike. These groups act as a liaison between third-party developers and the user community, act as a sounding board when technical direction is being set, provide reality checks for businesses, and assist in the dealing with the multifaceted personality of Apple.

While there is no substitute for complete exposure to and testing of new products, these programs help us fill in the missing pieces

GORDON STUDER

necessary to take full advantage of new technology. Apple must understand that these organizations are here to stay. By working with them, Apple will begin to more completely understand who its users really are.

Sally Rosenthal
Manager
Microcomputer Services
Amgen
Thousand Oaks, Calif.

Send letters to MacWEEK, 301 Howard St., 15th Floor, San Francisco, Calif. 94105. MCI 323-1203; fax (415) 243-3650. Include your name, address and phone number. Letters should not exceed 300 words. We reserve the right to edit for clarity and length.

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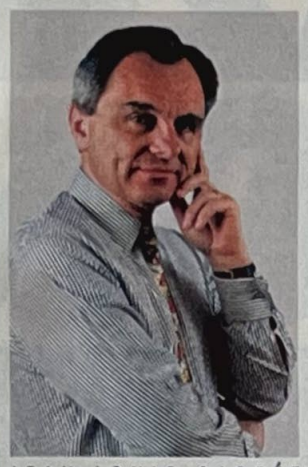
BPA

Commentary

U.S., Japan balance the power in PC industry



JEAN-LOUIS GASSÉE

The current rise of anti-Japanese sentiment brings back embarrassing memories. In the summer of 1987, I was in France spending my sabbatical writing HyperCard scripts and committing other refreshing sins. One night, the evening news anchor gravely showed a clip of Americans in suits bashing a Toshiba boombox on a Capitol Hill lawn. This time, the Japanese were accused of supplying high-precision milling machines to the Evil Empire. With these, the Soviets were going to make more silent submarine propellers and thus threaten the United States' lead in underwater stealth.

Sounds very dated now, or at least, the infraction does. The formidable empire of yesteryear is now shattered, bankrupt, hungry and squabbling.

Where is the villain? But the villain is still current in the United States and other countries. Curiously, in all the recent fracas, there is barely a mention of the computer industry. Control Data became a sales agent for NEC supercomputers without even a squeak. Is it because our industry is so much ahead of the Japanese, or is it that we are so enlightened that prejudice, bad faith, politics and protectionism can't touch us? Perhaps there is another explanation, more sobering and happier at the same time.

The reality is there is no such entity as an unalloyed U.S. personal computer industry. Look inside a Macintosh or a PC clone. What is purely made in the United States here? The logic board, the microprocessor, the DRAM, the ASICs, the disk drives, the power supply, the case, the keyboard, the monitor? Some, many, most all are made elsewhere even if the final assembly is performed in the United States. And even for the components and subsystems made in the United States, it couldn't happen without equipment made by the likes of Robert Bosch, Panasonic, Canon, Nikon and Hirata. A purely U.S. PC hardware industry is a myth.

The U.S. auto industry is not much different under the hood either. Although U.S. automakers might have you believe otherwise, cars produced by U.S. manufacturers also contain polyglot foreign-produced components.

The driving force. But in the computer industry, system software is the driving force, and the United States enjoys uncontested leadership so far. U.S. software makers are in such a commanding position, they end up taking money from all sides.

Only industrially incorrect thinkers will ponder over the paradox of U.S. system software companies (or microprocessor vendors, for that matter) giving foreign companies keys to the U.S. market.

Now, if there were foreign-made legal clones of Windows, Unix or NetWare, you can bet the air wouldn't be so pure, the attitudes so enlightened. If the U.S. company Quorum Software Systems can claim to have developed a "clean room" clone of the Mac, what about a dozen programmers in, say, India, writing a Windows clone? That would be fun. Suddenly Bill Gates would sound more like Lee Iacocca.

Is this bad? But is the lack of a pure U.S. PC industry such a bad thing? Or does the complex network of associations we have grown into guarantee better products and better relations? If that sounds like a rhetorical question, imagine a General Motors starting to use foreign parts or engines 70 years ago instead of being unchallenged and unallied for so long. "What's good for GM is good for the country" would sound very different — truer, perhaps.

We can't rewrite history. But we can read it. The mainframe industry, on a time scale normalized for the speed of technology improvements, enjoyed a GM kind of ride: cushy, isolated.

Our industry can count itself lucky. Some might deplore that it uses so many foreign components and sub-assemblies. They might see that fact as another case of unfair competition from the Far East or another example of the United States losing its edge.

We are inextricably entangled with foreign entities. Of course, there is always the spectrum of the relationship becoming unequal and, say, a Sony some day owning and operating an Apple. To which there are three answers: a) why not? U.S. companies are allowed to control foreign businesses; b) who do you want to work for, a Michael Milken riding an LBO or Akio Morita?; and c) good luck!

Just kidding. □

The Mac Manager

Let's get geographical with mapping software

DON CRABB

A review of the new Mac version of GeoQuery Corp.'s GeoQuery got me thinking about the whole category of mapping software and what it could provide to IS managers and their users.

Naturally, I got on the blower and got an earful about mapping applications from IS managers who actually use them in the course of the daily grind.

Why a computer map? The first thing that struck me in all of this was that most IS managers don't think about the geographic dimension of the data they work so hard to update and disseminate to their Mac users. Lots of corporate databases would be significantly enhanced by adding a "where" to the "what," "why," "how" and "when" now recorded.

Consider, for example, a database of all your company's suppliers, its customers and qualified contacts. Using non-geographical analysis tools, you might produce reports containing specific information about how many customers of product X (supplied by vendor Y) are in each city, county or state. But until you actually see this analysis overlayed on a map, it might not mean much to you.

Maps have a way of forcing you to consider geographic positioning as part of your analysis. A report with stuff such as ZIP codes or addresses just doesn't suggest the importance of geographic relationships the way a map can. Computerized maps also take the drudgery out of using that geographical information and make it easy to do multiple analyses in just a few seconds, a task that would probably take hours if attempted by hand with pushpins and paper maps.

Mapping the benefits. You'll also find you'll start to see some benefits you wouldn't have otherwise anticipated once you've taken the time to provide geographical data in a form that can be mapped by programs such as GeoQuery, MapInfo Corp.'s MapInfo and Strategic Mapping Inc.'s Atlas Pro.

Suppose you bring in mapping software so your marketing people can sort out the demographics of your current markets. It is likely that other managers, who have nothing to do with marketing, will take a look at how easy it is to see the relationships between geographic place and their critical variables (such as sales data, supplier information or distribution figures). Often, the mapping software can help build alliances among managers who never had much in common before because they hadn't really considered the geographic dimension of their jobs.

You can go high-end with mapping software and take maximum benefit of its features, making the connections between databases and dynamic maps automatic. GeoQuery, for example, supports publish and subscribe to applications such as Lotus 1-2-3 and Microsoft Excel, while offering direct links to ACIUS Inc.'s 4th Dimension through Apple events and 4D externals.

Even higher-end products such as Tactics International's Tactician can establish Data Access Language (DAL) links to any DAL server or DAL-compatible relational database, so you can build customized geographic-analysis systems.

Mapping weaknesses. There are still many holes in the growing availability of corporatewide strategic mapping systems, mostly because of the incomplete client-server software with some host computers (especially for non-SQL hosts).

Besides the connectivity holes, mapping software on the Mac suffers from a more fundamental display problem: how to show multiple time-based data and compare it. QuickTime, however, might offer the answer, as mapping vendors build time-based data features into their products and learn to let us display data over time on comparative maps.

The possibilities that mapping analyses offer us are, of course, less restricted by the currently available software than by our ignorance of how to use it. □

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multi-user Mac databases, has been optimized even further in Omnis 7, which was rewritten from the ground up, but maintains compatibility with Omnis 5. Programs developed in Omnis 5 will automatically convert to Omnis 7 format when opened and saved within the new database, sources said.
▸ **Cross-platform capabilities.** Both Mac and Microsoft Windows versions now use similar interfaces. For example, Windows conventions, such as combo boxes (pop-up lists
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1 Your company's primary business activity at this *entire* location:

(Select one only.) Write Answer Here ➨ ☐

Non-Computer Related
01. Aerospace
02. Architecture, Engineering
03. Research and Development
05. Communications: Graphic Arts, Publishing, Advertising, Public Relations, Promotion
06. Government
08. Manufacturing
09. Education
10. Finance: Banking, Accounting, Insurance, Real Estate
11. Health, Medical, Legal
12. Non-Computer Retailer, Wholesaler, Distributor
13. Agriculture, Mining, Construction, Oil, Transportation, Utilities

Computer Related
20. VAR/VAD
21. Retailer/Distributor
22. Systems House/Data Processing Service
23. Manufacturer (Computers, Software, Peripherals)
24. Computer Consultant
25. Other Businesses & Services (please specify) _____

2 Your Professional Title:

(Select one only.) Write Answer Here ➨ ☐

A. Chairman/President/Owner/Partner
B. VP/General Manager/Controller/Treasurer
C. Director
D. Mac/Micro Manager/Specialist/Coordinator
E. Network Manager
F. Project Manager
G. Art Director/Graphic Designer/Artist/Illustrator
H. Manager/Supervisor (not listed above)
I. Architect/Engineer
J. Systems Analyst/Programmer
K. Consultant/Advisor
L. Scientist
M. Educator
N. Editor/Writer
O. Professional (Doctor, Lawyer, etc.)
P. Accountant
R. Representative
Z. Other (please specify) _____

3 Your department/function at this *entire* location:

(Select one only.) Write Answer Here ➨ ☐

A. Engineering/Systems Engineering
B. Research & Development
C. MIS/DP/Information Systems
D. Communications/Publishing/Public Relations
E. Art/Creative Design
F. Manufacturing/Operations/Production
G. Sales/Marketing
H. Administration/Management/Personnel
I. Accounting/Finance
J. Education/Training
K. Science
L. Consulting
Z. Other (please specify) _____

4 Are there Macintoshes or other PCs listed below owned and/or planned for purchase within 1 year at this *entire* location?

☐ Yes ☐ No (Write in accurate quantity for all that apply.)

		Currently Owned (Quantity)	Plan to Buy (0-12 Months) (Quantity)
MODULAR	68040 Macintosh 2		
MODULAR	68030 Macintosh IIfx / IIci / IIcx / IIx 3		
MODULAR	68030 Macintosh IIsi 4		
MODULAR	68020 Macintosh LC 5		
MODULAR	Macintosh Portable/PowerBook 6		
COMPACT	68030 Macintosh SE/30 7		
COMPACT	Macintosh Classic/Classic II 8		
COMPACT	68000 Macintosh SE / Plus / 512 9		
OTHER	IBM/Compatible Micro 10		
OTHER	Workstation (e.g. Apollo, Sun, NeXT) 11		

5 If your firm's primary business at this location is retailing, reselling or consulting, how many Macintoshes are sold per year?

(Answer one only.)

A. Retailer: sold per year _____ (specify quantity)
B. Reseller: resold per year _____ (specify quantity)
C. Consultant: purchased by your clients through your firm's recommendations per year _____ (specify quantity)
☐ D. Not Applicable

6 Please check the Mainframe(s) or Minicomputer(s) at this *entire* location:

(Check all that apply.)

☐ 01. VAX ☐ 02. IBM Mainframe ☐ 03. IBM Minicomputer ☐ 04. Other ☐ 99. None

7 Do you purchase, recommend, specify or approve any of the Macintosh/Compatible products listed below?

Computers
☐ 01. Macintoshes
☐ 02. Workstations
☐ 03. Minis, Mainframes

Connectivity
☐ 10. Local Area Networks
☐ 11. Modems
☐ 13. Communication/Network Software
☐ 14. Mac to PC Links
☐ 15. Mac to Mini/Mainframe Links
☐ 16. Mac to UNIX Workstation Links

Peripheral Equipment
☐ 20. Laser Printers
☐ 21. Color Printers
☐ 22. Color Monitors
☐ 23. Hard Disks
☐ 24. Backup Systems
☐ 26. Scanners
☐ 27. Input Devices
☐ 28. Removable Storage

Add-In Boards
☐ 40. Memory Boards
☐ 41. Graphic Boards
☐ 43. Ethernet Boards
☐ 44. Video Boards

Software
☐ 50. CAD/CAM
☐ 51. Graphics
☐ 52. Desktop Publishing/Fonts
☐ 53. Desktop Presentation
☐ 54. Database
☐ 55. Programming
☐ 56. Accounting, Payroll
☐ 57. Spreadsheets
☐ 59. Project Management
☐ 60. Word Processing
☐ 61. Utilities
☐ 62. Multimedia
☐ 99. None of the above

8 If you answered yes to the above computer products, for how many Macintoshes do you have this involvement?

(Select one only.) Write Answer Here ➨ ☐

01. 1000+
02. 500-999
03. 100-499
04. 50-99
05. 20-49
06. 10-19
07. 1-9
99. None

9 Please indicate the networking/communications capabilities that the Macintoshes at this *entire* location have:

(Check all that apply.)

☐ 01. Local Area Network
☐ 02. Communicate with corporate workstations, mini or mainframe computers
☐ 03. Communicate with remote mini or mainframe computers
☐ 04. Communicate with mini
☐ 05. Communicate with mainframe
☐ 06. Communicate to remote network
☐ 07. Other (please specify) _____

10 Indicate how many employees there are in your entire company:

(Select one only.) Write Answer Here ➨ ☐

01. 1000 or more 02. 100-999 03. Under 100

11 Please indicate operating systems currently in use at this *entire* location.

(Check all that apply.)

Operating Systems
☐ 01. Mac OS
☐ 02. Unix
☐ 03. System 7

LAN Operating Systems
☐ 06. Novell Netware
☐ 07. Irmalan
☐ 08. Unix/NFS
☐ 09. Sitka (TOPS)
☐ 10. 3Com 3+ System
☐ 11. LAN Manager
☐ 12. Banyan VINES
☐ 13. Appleshare
☐ 14. DEC Pathworks
☐ 20. Other (please specify) _____

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Title _____ Date ___/___/___

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Reviews

- DataPivot. See Page 52.
- Classic Performer. See Page 53.
- In Brief: Gallery Effects, Workspace. See Page 53.

A to-do list that's worth doing

In Control is easy to use, powerful

By Dale Coleman

It's probably quite true that there's really nothing new under the sun, at least as far as categories of software go. Nevertheless, occasionally a product will demonstrate a rare glimmer of original thought — a better way of performing a familiar task. Attain Corp.'s In Control, billed as the to-do list manager for business applications, is such a product.

The novelty of In Control is that it can display and manipulate information in two ways: in an outline format (reminiscent of Symmetry Corp.'s Acta 7) and in a table format. The brilliance of the product is that you can alternate between the two views at the click of a button.

The basics. In Control rows are called topics. As with other outliners on the Mac, topics may be indented, collapsed, expanded and moved as desired. In Control departs from the traditional outline paradigm in that each topic is composed of one or more cells, like a spreadsheet. In database terms, each row is a record, and each cell within the row is a field within that record. You can set up multiple views of your data by shrinking and rearranging columns, saving these different states as a layout. When you look at a file in Outline view, topics can be moved around simply by clicking on them. In Table view, topics can be moved around by copying and pasting them. If you collapse a topic family in the Outline mode, only that family's main topic is visible, even in Table mode.

A few minutes of experimentation reveal the product's power and ease of use. The most frequently used functions are accessible from a tool bar called the Control Panel. It includes buttons for switching between Outline and Table views, sorting and selecting topics, creating new columns, and changing column characteristics. The Control Panel also includes a pop-up menu for switching between layouts, and the entire tool bar can be hidden from view with a mouse click.

Creating a layout and adding and modifying data in the layout could hardly be easier. Each column (or field) can be structured as text, numeric, date or time format; you can specify ascending, descending or a custom sort order. Data entry can optionally be aided by what Attain calls Entry Helpers: Pop-up Data List, Auto-type Data List and Pop-up & Auto-type. With these options, you can specify choices for a given column, whether they are automatically entered when you type the first few letters of the choice, and whether a pop-up menu of the choices is available. These options greatly simplify the entering of large amounts of data.

The power and utility of In Control's data-entry aids become apparent when you want to select a subset of your data. By using either the Match function or Match buttons on the Control Panel, you can quickly select topics that meet certain criteria. You also can hide topics by using the Omit command, which is handy for placing items temporarily out of view.

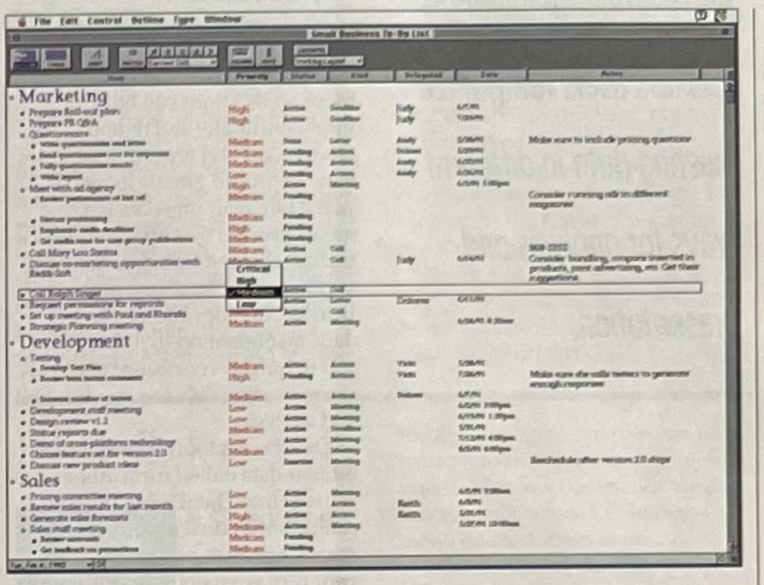
For the experienced user, In Control provides an extensive set of keyboard shortcuts for just about every action.

Playing dress up. In Control provides flexible control over font characteristics, including color. Further, you can define font characteristics for sections of your In Control document: the current topic, the current topic and all its subtopics, co-topics, the entire level, and all topics. One complaint we have about In Control's font settings is that while you can set a default font and size for the entire file, you cannot set default font attributes for columns or topic levels.

In Control uses a proprietary format for its files, but it can import and export files in text format. In addition, it uses Claris Corp.'s XTND technology for accessing foreign file formats, but we were surprised to find that the only translators included with In Control are for Claris' MacWrite and MacWrite II. However, if you have additional translators (from Claris applications or programs such as ON Technology Inc.'s On Location) they will work. The inclusion of translators for Acta 7, Claris' FileMaker Pro and Microsoft Word and Excel would add to In Control's utility in many installations, but the low $129 purchase price eases the pain of these omissions.

In Control's flexible design opens it to a variety of applications. The sample files included provide a good point of departure as well as a good introduction

See In Control, Page 54



Attain's In Control is a powerful to-do list manager with simple controls. Data can be viewed in either outline or table format, and the program also features a number of entry aids.

SCORE CARD
In Control
MacWEEK

Overall value	●
Performance	●
Features	●
Ease of use	●
Documentation/support	●
List price	$129

● Excellent ● Very good ● Good
◉ Average ○ Below average

ON BALANCE
In Control
Attain Corp.
MacWEEK

In Control is a new to-do list manager that lets you view and manipulate data in either outline or table format. Its intelligent design makes it both powerful and easy to use, and it has a number of data-entry and selection aids that makes it ideal for managing lists and tasks. Its low memory requirements and open license agreement mean that it is an excellent portable accessory. It could use a scripting capability and some minor improvements, but In Control is undeniably the product of choice for this particular application.

Cricket Draw hops back into illustration scene

By Philip Bishop

Cricket Draw, one of the pioneers in the Macintosh PostScript illustration market, has risen from obscurity, sporting 32-bit-color support, as well as improved Bezier curve control and enhanced text handling. The new version, CA-Cricket Draw III from Computer Associates International Inc. lists for $249. Registered owners of any previous version of Cricket Draw can upgrade for $49.

The last major version of Cricket Draw was released well over three years ago, and many users had given the product up for dead, especially given the rise of programs such as Adobe Illustrator, Aldus FreeHand and Deneba Software's Canvas.

Expanded color support. The old version of Cricket Draw supported only the eight standard QuickDraw colors. Cricket Draw III not only has opened the door to the 16 million colors of 32-bit technology, but you can now choose from gray-scale, HLS (hue, lightness, saturation), RGB (red, green, blue), CMYK (cyan, magenta, yellow, black) and Pantone Matching System color models. Any color can be saved for future use, although PMS colors are saved as CMYK colors and won't be color-corrected when printed. Color correction is controlled through the Professional Color Toolkit, a control panel that comes with the program and allows exact color values to be specified for a particular printer.

Many color options can be accessed in Cricket Draw III through an efficient floating palette. This provides access to color models and line and solid fill colors. This panel also lets you set the beginning and ending colors of shadows and fountain fills. Cricket Draw III makes programs such as FreeHand, by comparison, seem cumbersome when applying fountain fills (also known as graduated fills). You can select HLS, RGB and CMYK colors by entering percentage amounts or via slider controls that make experimentation both simple and enjoyable. PMS colors are selected from a scrolling list that displays 21 colors at a time. You can apply

See Cricket, Page 54

SCORE CARD
CA-Cricket Draw III
MacWEEK

Overall value	●
Performance	●
Features	●
Ease of use	●
Documentation/support	●
List price	$249*

● Excellent ● Very good ● Good
◉ Average ○ Below average

**Upgrades from any version are $49.*

ON BALANCE
CA-Cricket Draw III
Computer Associates International Inc.
MacWEEK

CA-Cricket Draw III has changed dramatically since its last update. It supports 32-bit color, as well as multiple color models, and includes a word processor, extensive Bezier control and a PostScript editing window. Unfortunately, it lacks support for TIFF files and is unable to represent bound text on screen or to edit text as paths, but overall, Cricket Draw III is a fine complement to existing drawing and illustration packages.

DataPivot turns the table on analysis

Brio's data-manipulation tool lets users reorganize existing data in different ways for analysis and presentation.

By Jonathan A. Oski

Most people store their data in either databases or spreadsheets — unfortunately, analyzing data using these applications can be both time-consuming and tedious. Query tools and reporting facilities have improved greatly in recent years, but analyzing data is a dynamic process that often requires a malleability not found in standard applications. DataPivot from Brio Technology Inc. is a new data-manipulation tool that allows you to quickly reorganize and rearrange existing data for presentation and analysis.

DataPivot's tools let you convert tabular data culled from other sources into DataPivot's unique multidimensional reporting construct. You then can view it from a variety of perspectives with a minimum amount of effort.

When individual bits of data are defined by two or more characteristics, it is referred to as n-dimensional. Sales figures are a good example of this type of data: A manager might need to view sales statistics based on different characteristics, including product type, region, salesperson and time. Analyzing this information using conventional spreadsheets or database reporting tools often demands that a number of different reports be created. It is here that DataPivot can be used to provide considerably more flexibility in data analysis and presentation.

Making data accessible. DataPivot is strictly a reporting and analysis tool; you cannot use it to edit your data. Nor does DataPivot have any true data-management capabilities. Any information you wish to examine using DataPivot must be imported in one of a number of ways. The best method for importing data depends on its source. If formatted properly, data from spreadsheets can be read directly into DataPivot. DataPivot expects your data to be row-oriented with field names appearing in the first row of data.

DataPivot can import SYLK, WKS, Microsoft Corp.'s Binary Interchange File Format or delimited ASCII files. Brio claims to support both comma and tab delimiters, but we were unable to import any comma-delimited files. DataPivot also supports System 7's publish and subscribe.

DataPivot requires System 6.0.7 or greater and a minimum of 2 Mbytes of RAM. Brio recommends you use System 7 to take advantage of its publish and subscribe features as these provide an ideal method for accessing data for use with DataPivot. Brio also sells a companion database query tool called DataPrism. While any database query tool should be more than adequate, if you use System 7, DataPrism can publish editions to which DataPivot can subscribe, thereby creating interapplication links between your database and data-analysis tool. Subsequently, you can publish editions from DataPivot if you need to embellish your data further with a graphing application.

Turning data on its head. Reports are commonly characterized by rows and columns of data. DataPivot extends this format by allowing you to quickly change a column of your data to a row, and vice versa. You can add additional characteristics to further classify your data, either columnwise or rowwise, and instantly see the results of adding another dimension.

Additionally, you can change one of your column dimensions to a row dimension — or vice versa — and instantly see your data presented in what could be a whole new light. This allows you to examine your data in a variety of ways, quickly, increasing your propensity to spot trends and create comparisons that otherwise might go unnoticed.

Although DataPivot is a powerful tool for analyzing data, it is not capable of meeting all your reporting needs.

DataPivot's real power and flexibility comes from a group of tools called Gadgets. Gadgets are accessible from floating palettes, allowing you to do everything from varying the display characteristics of a data element to limiting the range of values to creating formulas that compute values for new columns that you can add to your report. Most Gadgets are geared toward embellishing the appearance of DataPivot reports, but the Formula Gadget, a powerful tool, allows you to create your own computed columns that enhance the comparative views of data obtained with DataPivot.

Once you are satisfied with the view you have created of your data, printing reports is very straightforward. You can vary the appearance of your data using formatting tools that can alter the typeface and style of your data or row and column headers. DataPivot uses a Print Preview mode similar to Microsoft Word's, which allows you to make final adjustments to the margins and add page headers or footers.

Performance and limitations. The attractiveness of DataPivot as a data-analysis tool is largely because of its performance. DataPivot is remarkably fast. Once imported, all data from the source window is stored in memory to maximize performance. It is easy to use it to repeatedly rearrange data until a variety of possible relationships have been gathered. During our tests, performed on a Macintosh IIci with 8 Mbytes of RAM, operations on 2,000 to 3,000 rows of data took no longer than a few seconds to complete.

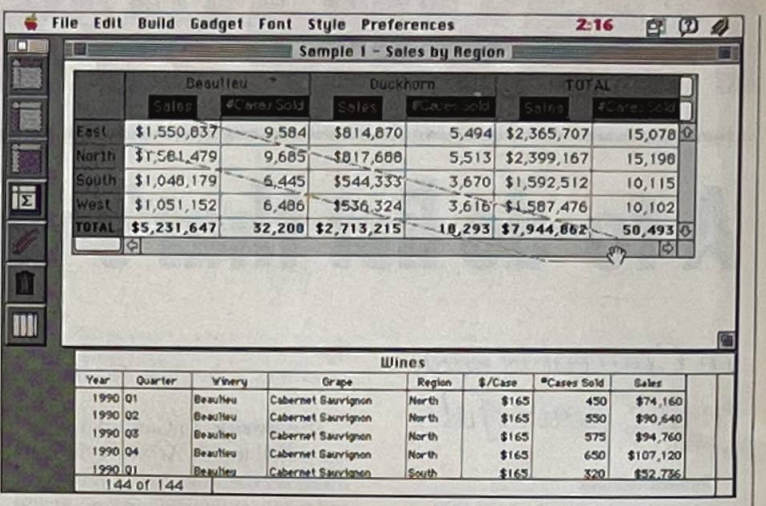
Although DataPivot is a powerful tool for analyzing data, it is not capable of meeting all your reporting needs. It should not be considered a substitute for tools that access data directly from a database-management system. Because it requires that data be exported from your database, it is not suitable for creating ad hoc reports. Also, since DataPivot loads all imported data into memory, it is limited in the number of rows of data it can work with at any given time. A theoretical limit of 32,000 rows is claimed by Brio, yet we found it difficult to work with more than a few thousand rows in an 8-Mbyte application partition under System 7. We also experienced problems accessing data in some Excel worksheets in which some of the data was derived using formulas and range names.

Conclusions. Despite some shortcomings, DataPivot, at $249, is a very good value. It does not offer any means by which you can create graphical representations of your data, but most users with a need for a tool similar to DataPivot should have a graphing application as well. The import and publish and subscribe features work well, but there are often occasions when you would need to query your database directly. Having to use another application to access all your data could make the iterative process of querying and analyzing data tiresome. We think that Brio should consider adding query capabilities to DataPivot to help streamline the data-gathering process.

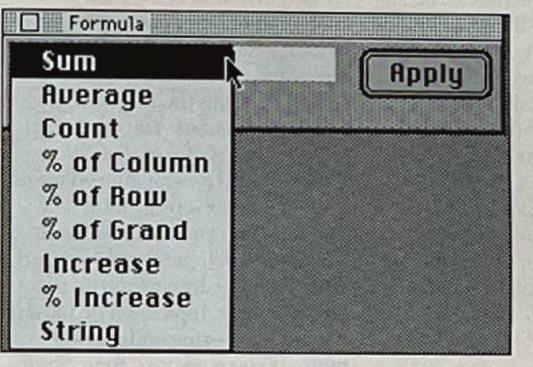
Its speed is commendable, and it is very easy to learn and use. For these reasons, it should be a hit with anyone who examines data in many scenarios. With the growing popularity of Apple's Data Access Language (DAL), Fairfield Software Inc.'s ClearAccess and other links to mainframe databases, data-analysis applications such as DataPivot are starting to emerge.

One possible competitor for Brio is Occam Research Corp., which recently shipped Muse, a $695 data-analysis package that offers a few more high-end features but might be overkill in some situations and prohibitively expensive for wide distribution in an organization. (An upcoming issue of MacWEEK will feature a full review of Muse.)

Brio Technology Inc. is at 444 Castro St., Suite 810, Mountain View, Calif. 94041. Phone (415) 961-4110; fax (415) 961-4572. □


File Edit Build Gadget Font Style Preferences 2:16
Sample 1 - Sales by Region
Beaulieu
Duckhorn
TOTAL
Sales
#Cases Sold
East $1,550,837 9,584 $814,870 5,494 $2,365,707 15,078
North $1,581,479 9,685 $817,688 5,513 $2,399,167 15,198
South $1,048,179 6,445 $544,333 3,670 $1,592,512 10,115
West $1,051,152 6,486 $536,324 3,618 $1,587,476 10,102
TOTAL $5,231,647 32,200 $2,713,215 18,293 $7,944,862 50,493
Wines
Year Quarter Winery Grape Region $/Case #Cases Sold Sales
1990 Q1 Beaulieu Cabernet Sauvignon North $165 450 $74,160
1990 Q2 Beaulieu Cabernet Sauvignon North $165 550 $90,640
1990 Q3 Beaulieu Cabernet Sauvignon North $165 575 $94,760
1990 Q4 Beaulieu Cabernet Sauvignon North $165 650 $107,120
1990 Q1 Beaulieu Cabernet Sauvignon South $165 320 $52,736
144 of 144

Brio Technology's DataPivot allows you to change the perspective of tabular data by changing a column of data to a row with a simple click-and-drag operation.



The Formula Gadget is one of the most powerful tools in DataPivot. You can use it to create computed columns that portray additional comparative views of data.

ON BALANCE

DataPivot
Brio Technology Inc.

MacWEEK

DataPivot is a flexible tool for analyzing data in ways that would be difficult or impossible with standard database and spreadsheet tools. DataPivot can gather tabular data from any System 7 edition file or text file, and in turn can make its unique reports available to subsequent subscribing applications. DataPivot lets you create reports from the perspective of any of the characteristics associated with each piece of data. It performs very well, even when handling thousands of records. DataPivot's reports are strictly textual, but by exporting to a variety of popular graphics applications, its reports can be further embellished.

SCORE CARD

DataPivot

MacWEEK

Overall value	●
Performance	●
Features	●
Ease of use	●
Documentation/support	●
List price	$249

● Excellent ● Very good ● Good
● Average ○ Below average

SYSTEM 7 COMPATIBILITY

DataPivot	
Balloon help	Yes
TrueType	Yes
Publish and subscribe	Yes
Apple events	Yes
32-bit addressing*	Yes

**According to vendor.*

Classic Performer: Speed at low price

Accelerator boosts Classic to 16 MHz

By Dale Coleman

In these modern times marked by System 7 and power-intensive applications, the entire topic of 68000-based Macs is passé to some. On the other hand, the original Classic was an enormous sales success and is still available despite the recent arrival of the 68030-based Classic II, which we judge to be a significantly better dollar value than the Classic (see MacWEEK, Jan. 13).

Low performance has always been an open invitation to third-party accelerators, and the Classic is no exception. One of the new entries in this rush to get things done is the Classic Performer, a 16-MHz 68000 accelerator from Harris Laboratories Inc.

Replacing the Classic's 8-MHz processor with the same processor running at a faster clock speed (and thus offering about twice the throughput of the original) might seem like a half measure, especially considering the availability of fast 68030 accelerators (including Apple's own Classic II upgrade). But the low price of the Classic Performer — $199.95, $259.95 with the optional 68881 math coprocessor — earns it consideration.

Installation. Installing the Classic Performer is surprisingly simple, especially considering that Apple made almost no provision for internal expansion of the Classic: It lacks an expansion slot and has an anemic power supply. Fortunately, however, the Classic Performer does not require the use of an additional power supply.

The accelerator snaps onto the Classic logic board. A 68-pin socket slips over the original 68000, and a 20-pin adapter plugs into the logic board's floppy drive cable connector. Although these two points alone seem to be sufficient to adequately anchor the accelerator board, the package also includes a strip of double-sided tape that adheres the board to the top of the Classic's ROM chip. In the course of the review, we installed and removed the Classic Performer board several times with no ill effect.

The Classic Performer is a well-designed board. The additional height does not keep the Classic logic board from sliding back into place. The replacement for the logic board's 20-pin floppy drive connector cable does lack guides, however, and is an invitation to improper installation and possible drive damage (as is documented), but competent installers shouldn't be put off. Installation takes less than 10 minutes.

Accelerator control is via a simple control panel that allows you to bypass the accelerator, although you must restart for changes to take effect. A special sound driver that is provided to ensure sounds are produced undistorted can be turned off in the same way. The help screen provided with the control panel is interesting but not very useful.

The supplied floppy disk contains several files that are not mentioned in the documentation. Since the mystery disk files are performance-measurements applications of one form or another, this is more offensive to our sensibilities than a serious productivity drawback.

Performance. The sole purpose of third-party accelerators is to increase the performance of an existing CPU. To this end, the Classic Performer is true to its name. By both explicit and intuitive measurements, operations run almost twice as fast (see chart, below). We were able to operate all the applications that we normally run on the Classic, including several word processors, spreadsheets and database programs. The documentation states that the accelerator is incompatible with Sitka Corp.'s TOPS but promises an eventual upgrade to the software.

Conclusions. The Classic Performer includes a lifetime warranty, and although it is easy to set up, installation must be performed by an authorized Apple technician if you want to preserve Apple's warranty. The manual is slim but clearly outlines the installation procedure and is illustrated with clearly reproduced photographs of the critical steps. Support is free with a toll call.

We operate Macs in a world in which the fastest IIfx is none too fast for some applications. But for many lightweight applications, the Classic is almost adequate. The performance increase afforded by this accelerator makes it quite adequate indeed for many of these applications. If your budget is extremely tight and you're responsible for a small installation that includes a few Classics, this upgrade might make sense. Otherwise, we recommend giving serious consideration to Apple's Classic II logic board upgrade, which costs $699 and offers significant benefits, including support for more than 4 Mbytes of RAM, 32-bit addressing and virtual memory.

Individuals who regularly work with more-robust Macs during the day and are easily frustrated with the performance of the Classic at home (especially after upgrading to System 7) may find the Classic Performer an acceptable compromise between performance and expenditure. The quality of the documentation and system software is not up to the high standards found in earlier accelerator products from larger companies such as Radius Inc., but then again the Classic Performer costs a fraction as much.

Harris Laboratories Inc. is at 7379 C Washington Ave. S., Edina, Minn. 55439. Phone (612) 941-2948; fax (612) 941-3515. □

SCORE CARD

Classic Performer

MacWEEK

Overall value	◉
Performance	◉
Features	◉
Installation/configuration	◉
Compatibility	◉
Documentation/support	⊙
List price	$199.95*

● Excellent ◉ Very good ◉ Good
⊙ Average ○ Below average

*68881 coprocessor, $60.

ON BALANCE

Classic Performer
Harris Laboratories Inc.

MacWEEK

The Classic Performer is an inexpensive, easy-to-install and highly compatible 16-MHz 68000 CPU accelerator for the Classic. It improves performance over the standard Classic by between 75 percent and 95 percent. While boosting speed, this accelerator will not give the Classic 68030 features such as 32-bit addressing and virtual memory that will be increasingly important with the release of new software. Compatibility is excellent, except for the current version's incompatibility with Sitka Corp.'s TOPS.

BENCHMARKS

Classic Performer
(Times in seconds; lower is better)

Classic Performer
Mac Classic
Mac Classic II

MacWEEK

CPU and graphics performance

Sieve
0 0.4 0.8 1.2 1.6 2.0 2.4 2.8

TimedLines
0 2 4 6 8 10 12 14

Math performance

EarthPlot/integer
0 20 40 60 80 100 120 140

EarthPlot/SANE
0 35 70 105 140 175 210 245 280

Tests were performed with System 7.0.1 with default memory settings and extensions turned off. Math performance was tested with 68881 math coprocessor installed.

IN BRIEF

- Gallery Effects
- Workspace

Gallery Effects

Plug-in filters enhance Photoshop, graphics apps

Aldus Corp. subsidiary Silicon Beach Software Inc. recently released Gallery Effects Volume 1: Classic Art, a $199 program that augments the graphics filter capabilities of Adobe Photoshop and other desktop graphics programs. The current edition, presumably the first of several, contains 16 filters for enhancing color and black-and-white images.

These filters include such effects as Charcoal, Watercolor, Spatter, Fresco, Dry Brush, Film Grain, Emboss and Craquelure. Some effects, such as Smudge Stick, imitate the way pigment or ink is laid on paper, while others, such as Mosaic, give the illusion of varied background textures. The range of effects complements those filters already available in Photoshop.

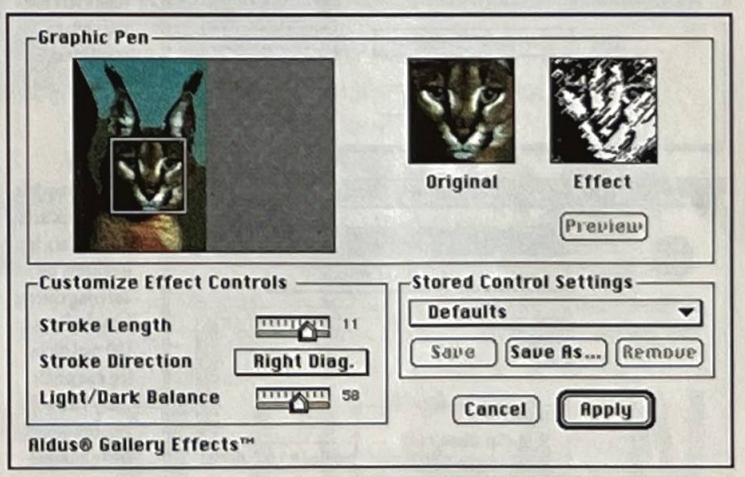
Each effect has its own Photoshop plug-in file, and installation involves dragging the files you want to use into the Photoshop Plug-Ins folder. The new commands appear in a special Gallery Effects submenu on the Filters menu.

Selecting any of the Gallery Effects from the menu calls up an elaborate dialog box in Photoshop through which you can modify the specific effects of the filter. For example, the Graphic Pen Effect allows you to adjust the Stroke Length, Stroke Direction and Light/Dark Balance of the filter. The dialog box also lets you preview the effect on a region of the image before committing to the overall change.

Beyond Photoshop. We would expect this package to be used primarily with Photoshop, but Silicon Beach offers a wide range of options beyond that program. Another set of filters is targeted at Aldus' SuperPaint 3.0 and Digital Darkroom. The package also contains an external command (XCMD) for manipulating PICS animation files in HyperCard 2.0 and in Aldus' SuperCard. In addition, a stand-alone application and desk accessory are included, which can be used independent of any other application to apply styles to (and resize) PICT and TIFF files. From these programs, you also can resize or print images, as well as save the filtered results.

The filters are well-conceived, and the package contains a wide

See Gallery Effects, Page 55



Silicon Beach Software's Gallery Effects Volume 1: Classic Art includes 16 filters that can be used with Adobe Photoshop, Aldus' SuperPaint 3.0 or other graphics applications. One helpful feature is the ability to preview a filter's effect on a part of your image before applying it.

In Control

From Page 51

to the product's potential. The examples range from small-business applications to complex product marketing tasks. Since all to-do lists are composed of essentially the same elements, including data and priority fields, the examples cover the major uses of In Control's features quite thoroughly.

The documentation, divided into a guided tour, a tutorial and reference, covers the product in a thorough and entertaining fashion. Each topic is covered in a logical manner. Many informative illustrations, an appendix of shortcuts and an excellent index complete the documentation package. It's the best evidence we've seen that attractive, useful documentation needn't be overly produced.

A welcome feature that has nothing to do with the application itself is legal support for Mac PowerBooks and other portables. Attain's license agreement specifies that In Control users can use the program on a portable without conditions, which is laudable. Given the flexibility in data entry and display, and the fact that it lives well in a 512-Kbyte partition, In Control is an excellent tool for portable computing.

SYSTEM 7 COMPATIBILITY

In Control	
Balloon help	Yes
TrueType	Yes
Publish and subscribe	No
Apple events	No
32-bit addressing*	Yes

**According to vendor*

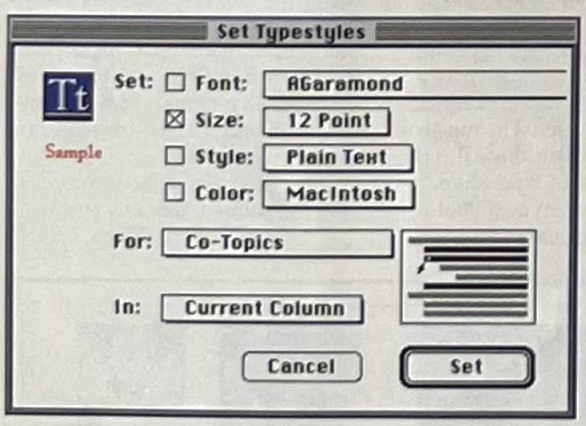
Conclusions. Creating a to-do list is a relatively simple process that requires only a little thought and some recording medium. It's the managing of to-do lists that can benefit so much from the power of a computer. In Control stands out because it makes the tools for list-management tasks, including assigning and reassigning priorities and zeroing in on a certain class of tasks, extremely simple. As a result, it is a tool that is likely to actually be used.

Although we are generally pleased with the implementation of In Control, a few areas need work. We would like to see a limited scripting facility, similar to that found in FileMaker Pro, that would let users quickly select a data set and a layout. We would like to see support for Apple events, which would allow users to link an item in a list to an address-book program or database to gather peripheral information. Attain has said that Apple-events support and better font handling are priority items for the next version.

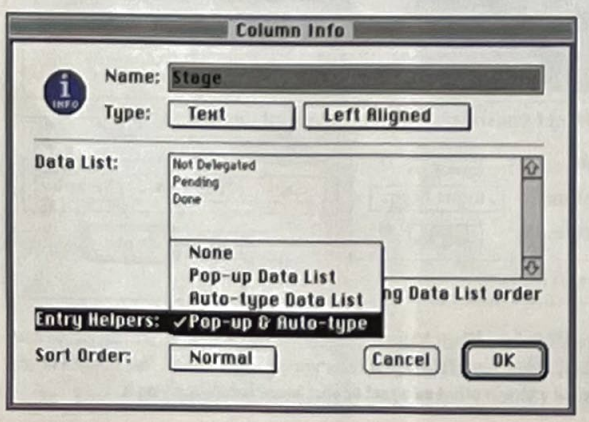
We would also like to see better sorting capabilities in the product; currently, adding topics or switching to Outline view returns you to the presorted state.

The creators of In Control, Dan Chadwick and Alan Albert, are the original creators of FileMaker, a product that has become popular in large part because of the simplicity and power of its design. By cleverly combining the features of an outliner with the features of tabular data, Chadwick and Albert have created a standard for to-do list management that is likely to stand for some time. If you manage lists or if you just appreciate well-designed products, In Control is worth a careful look.

Attain Corp. is at 5 Irving Terrace, Cambridge, Mass. 02138. Phone and fax (617) 547-2188. □



In Control's Set Typestyles dialog box offers a wide range of options for formatting text. The graphic at the lower right displays which topics will have the style attributes applied.



The Column Info dialog box sets parameters for a column. By entering choices into the Data List and choosing one of the Entry Helpers, you can quickly enter information into a column with a minimum of keystrokes.

Cricket

From Page 51

the color as is or specify a percentage of coverage.

Basic attributes for fountain fills and shadows are assigned through dialog boxes. The options for fine-tuning fills and shadows are impressive. There are four styles of fills (linear, radial, concentric bands the same shape as the selection, and bands that "echo" the shape of the selection). You can specify an angle of offset, and you can customize the progression of colors between the specified starting and ending points using Bezier handles. We used the related dialog boxes so frequently, in fact, that we wish they were accessible from the floating color palette.

Lovely lines. Cricket Draw III not only provides support for PostScript Bezier curves, but any object drawn with a line tool or geometric shape tool can be edited at the path level simply by ungrouping it. Paths can be easily regrouped. Cricket Draw III does not let you convert text to an editable path, which we feel is an important omission. This feature will be available in future versions, however, according to Computer Associates.

Cricket Draw III adds a number of transformation capabilities not found in earlier versions: scale (up to 9,999 percent of the original); free rotation of objects; and a dialog box that allows you to apply multiple transformations to an object (duplication, rotation, skew, scale and move, as well as the assignment of color attributes) in one fell swoop.

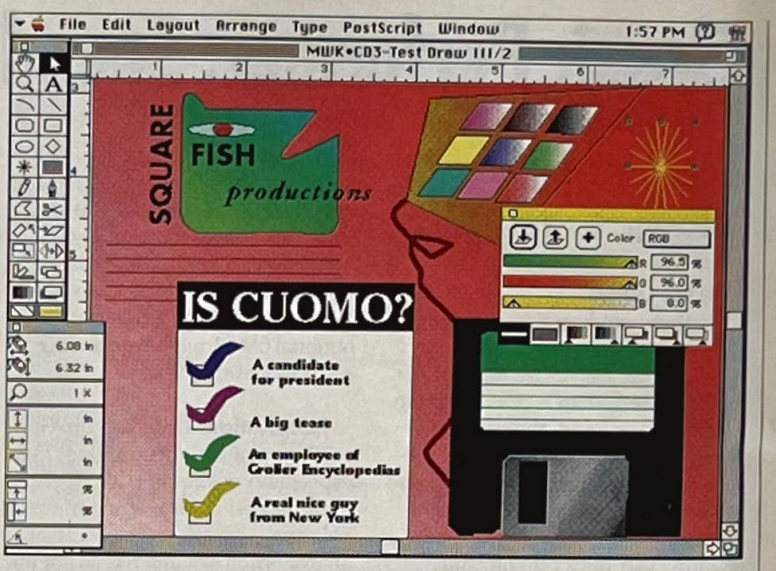
The Clip Groups function allows you to punch a hole in a background object with a foreground shape, cookie-cutter fashion, or to make a stencil of background objects based on a foreground shape.

Improved text handling. Cricket Draw III replaces the simple text blocks of earlier versions with a word processor that includes a text ruler, tab, margin and leading settings. Type can be kerned either automatically or manually. Colors and shadow can be applied to text, but fountain fills cannot.

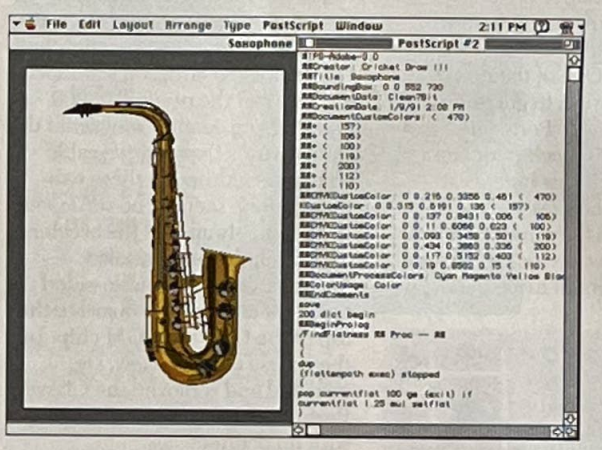
Text can be bound to almost any path. The bad news is, however, that Cricket Draw III doesn't let you see the effect on screen; rather, it simulates text with a line pattern. You can review the effect only in printed form. For a professional work environment, this is unacceptable. Computer Associates blamed shipping deadlines for this shortcoming and said this problem should also be corrected in the next upgrade.

Cricket Draw III comes with 14 halftone effects that can be applied to objects. For the PostScript-literate or the technically adventurous, a PostScript editor is included that displays the code for any object and lets you edit or create your own effects, although we doubt most users will find it useful.

Friendlier interface. The main tool palette now floats and moves,



CA-Cricket Draw III offers 32-bit-color support, multiple color models, a simple word processor and objects that can be ungrouped and edited with Bezier controls.



CA-Cricket Draw III offers a PostScript editor that allows you to customize objects and effects.

and another floating palette displays mouse coordinates, rotation degrees and other data. In general, however, we wish Cricket Draw III offered fewer dialog boxes and more floating palettes.

Files can be imported in PICT, Encapsulated PostScript and MacPaint file formats and exported in PICT or EPS form. TIFF file import and export, however, isn't supported, an omission we hope will be corrected. We would also like to see multiple layering and more levels of undo; one is never enough.

Screen redraw speed is a perennial concern in color illustration programs. Cricket Draw III lets the user determine how many steps are to be viewed in a fountain fill. The trade-off is lower on-screen resolution for added speed, but we really appreciate this option.

Low-end QuickDraw color printers can make use of the full palette of colors available in Cricket Draw III, thanks to dithering options provided in the Print dialog box.

Cricket Draw III's documentation is generally thorough, although it could be improved by adding real-world examples of how to get the most out of features such as Clip Groups and halftone effects.

Conclusions. Cricket Draw III's major advantages over products such as Illustrator and FreeHand can be found in its excellent color handling and the ease with which objects can be converted to Bezier paths. We also liked the product's flexible screen redrawing options, PostScript editing window and support for color QuickDraw printers.

Cricket Draw's lack of TIFF import, as well as its inability to provide on-screen representation of certain effects or to edit text at the path level, are crucial limitations, however. Though its lower price might sway casual users looking for a PostScript drawing program, we perceive the current version of Cricket Draw as a complement, rather than a replacement, to products such as Illustrator, FreeHand or Canvas.

With its improvements, CA-Cricket Draw III has made significant progress toward being a true competitor in the drawing and illustration software market. We hope that Computer Associates' newfound commitment to Cricket Draw will result in timely upgrades to this product.

Computer Associates International Inc. is at 1 Computer Associates Plaza, Islandia, N.Y. 11788-7000. Phone (516) 342-5224; fax (516) 342-5329. □

SYSTEM 7 COMPATIBILITY

CA-Cricket Draw III	
Balloon help	Yes
TrueType	Yes
Publish and subscribe	No
Apple events	No
32-bit addressing*	Yes

**According to vendor*

Gallery Effects *From Page 53*

variety of formats and applications. The controllable characteristics allow users to derive a wide variety of effects, from subtle to complex. An excellent and handsome manual almost too thoroughly documents the application. In short, Gallery Effects is a classy product.

On the other hand, many users have no need to distort images or add special effects; their goal is simply to get images as clear and sharp as possible. Unless you find that you need more effects than the basic Photoshop set contains, or perhaps you don't own Photoshop — Gallery Effects, at $199, may well be a luxury you can do without.

Silicon Beach Software Inc. is at 9770 Carroll Center Road, Suite J, San Diego, Calif. 92126-4551. Phone (619) 695-6956; fax (619) 695-7902. — *By Steve Hannaford*

Workspace

Project-oriented tool redefines file organization

Ark Interface Inc.'s Workspace is designed to improve individuals' work flow by automatically organizing work and applications on a project basis. In some respects, it's similar to CE Software Inc.'s Tiles, but whereas Tiles extends the Finder's familiar icon metaphor, Workspace provides a unique graphical environment that overlays the Finder's desktop with one of three functionally equivalent "offices." Each Office is equipped with a table with work tools, a bookshelf with binders holding applications by category, portfolios holding documents by project and a calendar that tracks time.

When you install Workspace, it searches for available applications and organizes them by genre in binders. Unfortunately, Workspace recognizes only 23 common applications, so you must tediously shelve all others. Nothing is actually moved around on disk; Workspace simply creates its own pointers, somewhat like System 7 aliases, to facilitate application launching. Each binder may have a related tool icon on the table that launches the binder's default application when double-clicked. Pop-up menus, however, would allow far easier selection of applications.

Existing data documents must be manually linked, copied or moved into portfolios. Thereafter, Workspace automatically stores new documents in the appropriate portfolio, eliminating the need to track the whereabouts of related files. For the forgetful and those tired of burrowing through nested folders, this is perhaps Workspace's most useful feature. On the other hand, if you're accustomed to Now Software Inc.'s Super Boomerang or similar utilities, you'll be annoyed by Workspace's interference with the default folder presented in Save and Open dialog boxes.

Documents in portfolios may be referenced by list or by a Snapshot (a visual cue consisting of a thumbnail view of the document as it appeared prior to closing). To resume work, you double-click the Snapshot to launch the application and open the document. Snapshots are great for identifying graphics documents, but Snapshots of spreadsheets and text documents are virtually indistinguishable at such small sizes.

If you bill clients by the hour, you'll appreciate that Workspace generates daily, weekly and monthly reports showing the time spent on each project. The clock pauses during periods of inactivity, but there's no way to manually edit the time files in case, for example, you neglect to close a portfolio before beginning other work.

Workspace 1.0 requires System 7 or MultiFinder under System 6.0.5 or higher. It also requires a Macintosh with at least 2 Mbytes of memory.

With Ark Interface's Workspace file-organization tool, related documents are automatically grouped by project and may be referenced by list or by Snapshot.

Despite its ambitious goal of redefining the way we work with computers, Workspace is not for everyone. Setting up and adjusting to Workspace takes time, but Ark offers a 30-day money-back guarantee, so you can try the $149 application without risk. If you're comfortable with the Mac's file organization, you may prefer another file launching utility (or nothing at all) because Workspace places an additional layer between you and the Finder. Visually oriented users, however, may relish the opportunity to delegate menial file-maintenance tasks so that they can concentrate on their work instead of the computer.

Ark Interface Inc. is at 1201 Third Ave., Suite 2380, Seattle, Wash. 98101. Phone (206) 654-4180 or (800) 275-3698; fax (206) 654-4188. — *By Owen W. Linzmayer*

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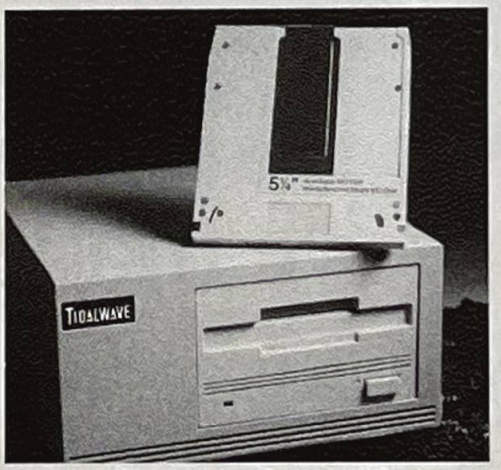

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PRODUCT WATCH

- Buying info
- Expert advice

Image enhancement clearing up gray scale

New advances in desktop printer software are lowering the costs of printing high-quality gray-scale images. While still not cheap, image enhancement technology can be a cost-effective alternative to expensive gray-scale imagesetters.

By Mitzi Waltz

David Levy, coordinator of marketing services at The Hornet Foundation, is grinning over going gray. The non-profit foundation, which provides printing services for students, faculty and staff at the California State University campus in Sacramento, Calif., has just added a 1217 Pro-III printer from Printware Inc.

Priced at $17,990, the Pro-III (and its $9,990 sister, the 720 IQ Pro-II) uses a RIP (raster image processor) algorithm embedded in its proprietary Zip RIP to improve gray-scale printing.

"We're experimenting now with ways for clients to take advantage of high-resolution gray scale without paying a high price," Levy said. "Usually people here are working on a shoestring — or less." According to Levy, the Pro-III prints 1,200-by-600-dpi halftones that reproduce well regardless of whether a client uses an offset printer for the final product or simply runs it off on the foundation's xerographic copiers.

"Our first issue is to educate [users] as to the difference in quality and to establish it as something to really strive for," Levy said. "We want to see if we can keep more of the graphic design work on-campus and increase the quality of the jobs we're doing." He expects to see more organizational fliers, newsletters, annual reports and graphic-design assignments coming through the foundation now that better gray-scale printing is available.

IET is the key. Image enhancement technology (IET) that enhances halftone appearance is at the root of gray-scale printing's recent gains. It builds on image-enhancement software that smooths curves and characters, already available with many printers, to improve halftone resolution, generally by varying dot size and pattern.

The result is a greater range of perceived values in gray-scale images, including crisper "blacks" and more-realistic shading, than a laser printer can normally achieve.

This image, scanned by Eric Neylon of MarinStat Graphic Arts in Mill Valley, Calif., shows the benefits of Light Source's Ofoto software, which uses image enhancement technology. Note the clear highlights and improved contrast on the Ofoto image on the left, compared with the darker image on the right.

IET products. Along with Printware, companies pushing gray-scale IET include NewGen Systems Corp., with an upcoming gray-scale addition to its IET software, and LaserMaster Corp., which has scheduled its TurboGray IET software for a second-quarter release.

IET is also the special ingredient in Apple's latest offerings, the LaserWriter IIf and IIg, priced at $3,599 and $4,599, respectively.

Both Level 2 PostScript printers can achieve 300-dpi output that looks more like 800 dpi, Apple claims, by using Apple's PhotoGrade image-enhancement chip to give graphics more than 67 levels of gray.

PhotoGrade is standard on the IIg and IIf, although an extra 4 Mbytes of RAM is needed to enable it on the IIf. This RAM is available from Apple for $299.

Gray scale = green. Better-quality output is always nice, but the most obvious reason for workplace joy over gray-scale IET is saving money — these technological improvements can help users avoid buying an expensive imagesetter (or using a service bureau's) just to print quality halftones.

At prices considerably below $20,000, these printers offer substantial savings to in-house publication departments, newspaper and newsletter publishers, and small service bureaus.

The biggest savings can be accomplished at the low end of the gray-scale printer range, of course. At Hazco Services Inc., a safety-products distribution company in Dayton, Ohio, Apple's LaserWriter IIg is taking the place of its IINT as a workhorse for in-house mailings, fliers and other promotional pieces.

Gray-scale capability will improve the appearance of these documents and possibly add extra value, said Lesa Chaney, advertising promotions coordinator at Hazco.

"A lot of the things we sell and distribute are pieces of instrumentation, and you need a lot of detail on the illustrations — we hope [gray scale] will give us that," she said. "I think it'll be changing the type of graphics [we do] rather than the quantity, however."

High-end results. As Apple brings up the rear, other vendors are concentrating on high-end business. LaserMaster is aiming its TurboGray IET software, which will be part of its conventional TurboRes IET software, at users like Peter DeArmond, publisher of the Kern Valley Sun in Lake Isabella, Calif. DeArmond wants to end his small-town weekly's reliance on an ancient, unreliable halftone camera by bringing all its gray-scale printing to the desktop.

Currently, he's using a LaserMaster 1000 to handle advertisements, the front page and most section fronts, but he's looking toward purchasing either a $16,995, 1,200-by-800-dpi LaserMaster 1200, once TurboGray is released, or a Printware Pro-III.

"At minimum, we need a 1,200-dpi printer," DeArmond said. "A Linotronic or Varityper is a lot more expensive [than the LaserMaster 1200 or Pro-III], and you've got to have your chemicals."

For DeArmond, gray-scale quality from high-end laser printers isn't quite there yet, but he expects that gray-scale IET will soon bring it in line with his needs, allowing him to cut costs while improving his paper's look. "There's got to be a huge market out there of small newspapers and others that would love to get rid of all their silver papers and chemicals and broken-down cameras and go totally desktop," he said.

TurboRes also comes with LaserMaster's $4,995 Laser-

See Image enhancement, Page 60

PriceWatch
IET PRINTERS

Item	List price	Street price	Source
Apple LaserWriter IIg	$4,599	$3,736	ComputerLand Augusta, Ga.
LaserMaster Corp. LaserMaster 1000	$6,995	$5,750	Businessland Chicago
Printware Inc. 720 IQ Pro-II	$9,990	$9,990	Alpha Imaging Technology Andover, Mass.

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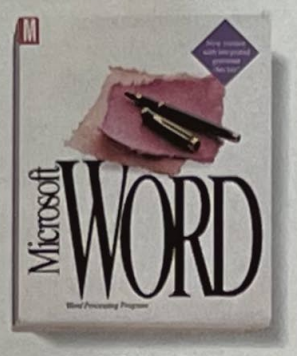

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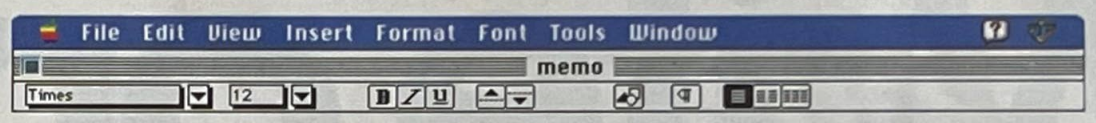

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Image enhancement

From Page 57

Master 800, $3,795 LaserMaster 800/4 and $6,995 LaserMaster 1000. In fact, according to Bill Neuenschwander, LaserMaster marketing communications manager, TurboRes with TurboGray eventually will add enhanced 256-level gray scale to even the lower end of its product line, such as the 400-dpi, $2,195 MaxWriter 400.

The company also may make it available as part of a TrueImage-based product for other printers through its OEMs, Neuenschwander said.

Also planning to release a gray-scale IET upgrade to its proprietary image enhancement technology later this year is NewGen Systems, which covers a large range of market levels with its IET-equipped 400-dpi TurboPS/400P ($2,995) and the 1,200-by-600-dpi TurboPS/1200T ($17,995), which is capable of 11-by-17-inch output.

NewGen's gray-scale enhancement product will be standard on future printers, according to Product Manager Brian Anderson, and it will be available with image enhancement technology as an add-on for other NewGen printers.

Pricing for the gray-scale upgrade has not been set, he said.

Gray-scale helper. Gray-scale input is also improving as scanning and image-editing software becomes more capable and reliable.

One product that's been making waves is Ofoto from Light Source Inc., which comes packaged with the Apple OneScanner or, for $395, in a new stand-alone version for scanners from Abaton, Epson America Inc., Hewlett-Packard Co., Microtech International Inc. and Panasonic.

Ofoto uses a three-step process to generate 256-level gray-scale images, place them in an editing or publishing program, then calibrate them directly to the user's imaging device.

"For the first time, people who produce newsletters and brochures on the Mac have the tools to make halftones in-house and get really nice, consistent results," said Eric Neylon, manager of Mill Valley, Calif., service bureau MarinStat Graphic Arts Inc. "Before Ofoto, I saw hardly anyone using desktop-scanned photographs for anything other than FPOs because of the terrible lack of predictability," Neylon said.

"[Light Source has] written some pretty good software and algorithms to do the tonal corrections and redistribute the gray scale so it comes out looking good in the end," Neylon said. "I'm getting results that nearly rival my dedicated $100,000 halftone scanner."

Halftones cost about $7 to shoot at a print shop, plus as much as $15 for manual stripping.

That's why scanning and retouching photos in-house looks so attractive to many users, especially when printing them out on one of the new gray-scale IET-equipped printers costs no more than 70 cents. According to Neylon, however, that's a secondary issue. "I think the important thing is quality and consistency," he said. □

Product Info

APPLE
LaserWriter IIg: $4,599
LaserWriter IIf: $3,599
Apple OneScanner (with Ofoto and HyperScan software): $1,299
IIf 4-Mbyte RAM upgrade: $299
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Phone (408) 996-1010

LASERMASTER CORP.
MaxWriter 400: $2,195
LaserMaster 800/4: $3,795
LaserMaster 800: $4,995
LaserMaster 1000: $6,995
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Ofoto 1.1: $395
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NEWGEN SYSTEMS CORP.
TurboPS/400P: $2,995
TurboPS/1200T: $17,995
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PRINTWARE INC.
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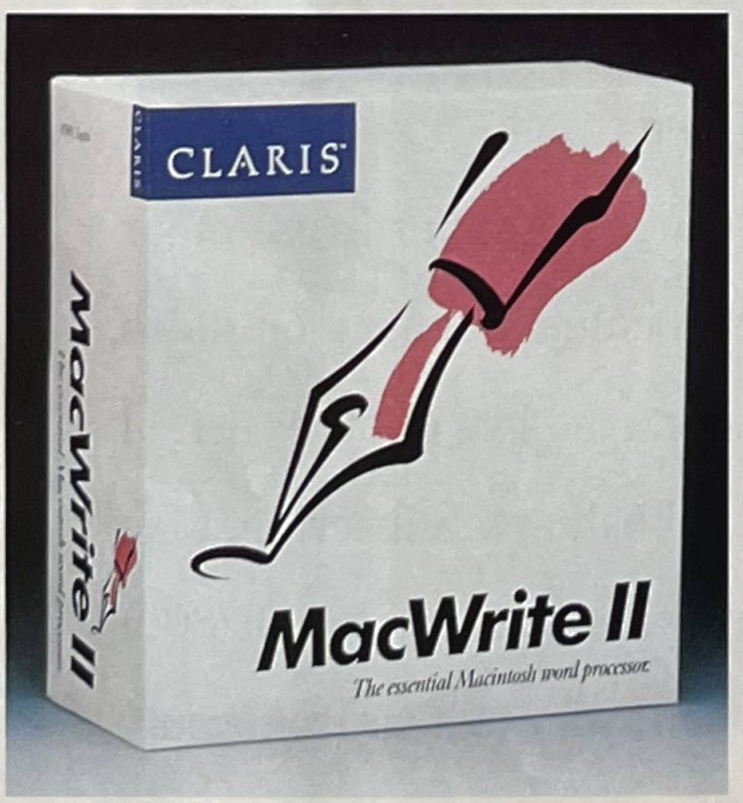

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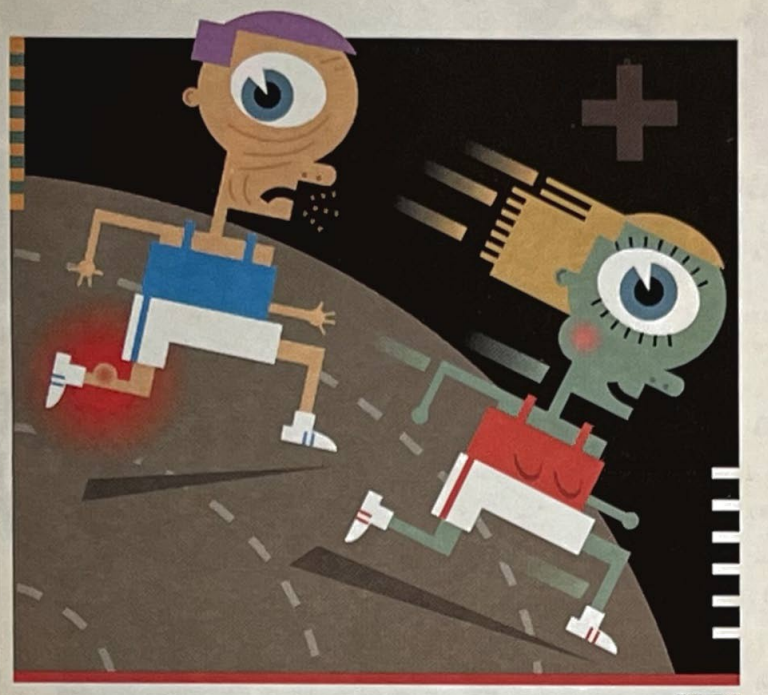

GORDON STUDER

MacInTouch RIC FORD

Mac in race to become standard of the '90s

After years in the shadow of the MS-DOS standard, the Mac has a chance to be the standard for the '90s, and the first glimpse of the future comes from Quorum.

ISSUES & TRENDS

Racing standards. For years, the Macintosh has placed second to MS-DOS in the marketplace, because DOS was the established standard. That standard, however, has now degenerated into a tangle of technologies.

No one expects a massive defection of IBM PC and compatible users and developers to the Mac, but maybe they would be better off if they made the switch now. The Mac offers a remarkably powerful, consistent platform and a base of applications that has legs.

Look at the central body of applications on the Intel platform. Their user interfaces are badly designed and inconsistent. Their internals are written for an obsolete operating system and obsolete hardware.

DOS developers have no consistent architecture within which to redesign their applications for the 1990s. Microsoft Corp. and IBM Corp. are fighting each other for "mind share" and struggling with massive technical issues in their attempts to introduce new, 32-bit operating systems that work with existing applications.

Economic futures. The current state of affairs seems like a recipe for Apple success. But market momentum is a powerful thing. Many developers are betting that Windows users will out-purchase Mac users over the next few years, based on the flow of Windows systems into businesses and homes right now. They could be right.

But what happens in two to three years? The basic personal computer will be the equivalent of today's Mac Quadra or RISC (reduced instruction set computing) workstation. Are buyers and developers going to move Windows applications to these machines easily or will they be forced into costly additional investments?

One clue lies in the introduction of Latitude and Equal, two surprising products from Quorum Software Systems Inc. (see MacWEEK, Jan. 20). These programs let developers transfer Mac applications very quickly to standard RISC machines today, including Silicon Graphics Inc.'s Iris Indigo and the RS/6000- and SPARC-based computers.

Quorum looked at doing the same thing for Windows applications, but it seems that the Mac application base now constitutes a stable standard from both user interface and operating system viewpoints, while the Windows applications base does not.

The situation is not likely to change quickly, and this technology gap is one Apple can exploit to dramatic advantage if it plays its cards right in the near future. The shoe is now on the other foot, and the race could become much more interesting than it has been to date.

BUGS & TIPS

MicroPhone bug. MicroPhone II 4.0, the long-awaited, System 7-savvy release of Software Ventures Corp.'s telecommunications application, has at least one minor bug.

If you try to download a file to a disk volume that has more than 32,768 blocks free, the program complains that the volume is full.

Software Ventures has published a procedure for patching parts of the program with a resource editor, such as ResEdit or Resorcerer, to fix the problem. The details are available in file MP4FIX.TXT in Library 7 at GO ZMC:DOWNLOAD on ZiffNet/Mac.

Super Boomer bombs. Now Software Inc. has released a patching utility that fixes problems in Super Boomerang 3.0.1 that can cause system crashes on 68000-based Macs running System 7 and Macs with more than 16 Mbytes of RAM. The patcher updates Super Boomerang 3.0.1 to Version 3.0.1, but it is not very flexible — it works only when Super Boomerang is installed in the Control Panels folder within the current System folder. The program is available from on-line services, including ZiffNet/Mac, where it is file SB301P.BIN in Library 13 at GO ZMC:DOWNLOAD.

FileMaker to ClarisWorks. Rich Coulombre, co-owner of The Support Group in Newton, Mass., wrote in with an easy way to move data from FileMaker to ClarisWorks. Layouts have to be recreated in ClarisWorks after the transfer, but fields are defined automatically. The trick is to export from FileMaker in Data Interchange Format (DIF) and import to ClarisWorks using the Import Options flag during Open.

REFERENCE

Quorum Software Systems Inc. is at 4700 Bohannon Drive, Suite 125, Menlo Park, Calif. 94025. Phone (415) 323-3111; fax (415) 323-3113. □

Comments on MacInTouch are welcome at 7 Parmenter Ave., Maynard, Mass. 01754. Phone (508) 897-2621. Address electronic mail to RICFORD on MCI Mail and AppleLink; to 72511.44@compuserve.com from the Internet; to 72511,44 on CompuServe and to MACWEEKBOS from America Online and GEnie. Join us on-line in the MacWEEK Forum by typing GO ZMC:MACWEEK on CompuServe or ZiffNet/Mac.

Ask David Ramsey

INIT conflict resolution made easy

Q: *I normally run more than 15 Startup documents (INITs). Is there a better way to resolve conflicts than by removing INITs one at a time?*

A: Conflicts between INITs — system extensions under System 7 — are easier to find if you turn off all of your INITs then re-enable them one by one. I suggest using an INIT utility such as Microseeds Publishing Inc.'s INIT Picker or Now Software Inc.'s Startup Manager to do the work, especially with System 7. But even this method is hard-put to spot some problems, such as the nasty incompatibility between Salient Software Inc.'s AutoDoubler and Connectix Corp.'s Hand-Off II, which causes crashes but only when System 7's file sharing is on.

Getting better answers. Two recent products attempt to make the process of finding software conflicts easier. The first is Baseline Publishing Inc.'s $69.95 INITInfo Pro, a collection of information on system configurations and conflicts written by Glenn Brown and Gary Ouellet. Originally a shareware product built from reports of software conflicts gathered on various on-line services, INITInfo is the most concentrated source of such information available.

INITInfo Pro includes a 245-page book and a HyperCard stack, which duplicates most of the information in the book. The stack allows you to look at System 6 information, System 7 information or both. It's convenient, if somewhat clumsy. For example, searching for System 6 information on Now Software's Super Boomerang reveals a potential three-way conflict between it, Fifth Generation Systems Inc.'s Suitcase II and Dubl-Click Software Inc.'s ClickChange 1.04. This search lands you in the System 6 entry for ClickChange, but if you then switch to the System 7-only view, you're left with a display of ClickChange's System 7 info with no mention of Super Boomerang. Searching for Super Boomerang and System 7 also takes you to the same System 7 ClickChange screen, with no Super Boomerang info visible.

In general the book is more useful. It's indexed comprehensively and contains all the information in the stack and more, including a detailed guide on isolating and solving conflicts, a set of System 7 installation tips, and an extremely informative article on SCSI setup and termination. Next week I'll cover Teknosys Inc.'s Help!, a product that scans your system to locate potential conflicts.

Please send questions to David Ramsey on CompuServe: 76702,335 or to Ask David Ramsey, c/o MacWEEK, 301 Howard St., 15th Floor, San Francisco, Calif. 94105.

The Help Desk

Unoriginal names may be a bane for file sharing

Many people give names to hard disks to personalize the company computers sitting on their desks. Others leave their hard disk with the name Apple gives to all such devices: Macintosh HD.

In a world connected via System 7's file sharing, those whose desktops are graced with Macintosh HDs may be in for a little trouble. Some programs, notably Microsoft Excel and Lotus Development Corp.'s 1-2-3 for Macintosh, cannot open files on a shared disk that has the same name as a local disk.

The solution is to rename one of the hard disks. Some System 7 users cannot do this, however, so they must start up under System 6 to rename.

(Thanks to Akira Takaesu of Mitsui and Co. Canada Ltd. in Vancouver, British Columbia, for this tip.)

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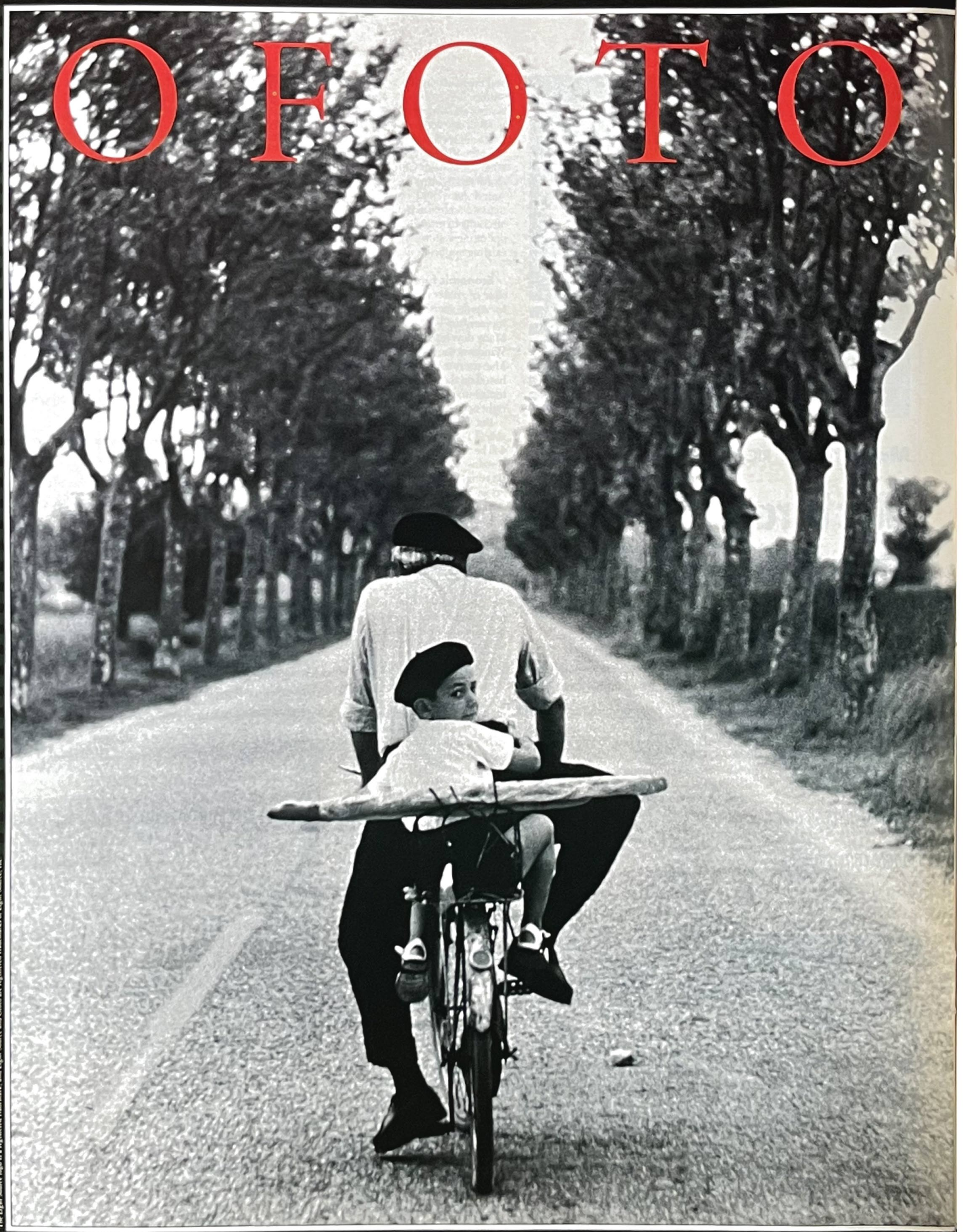

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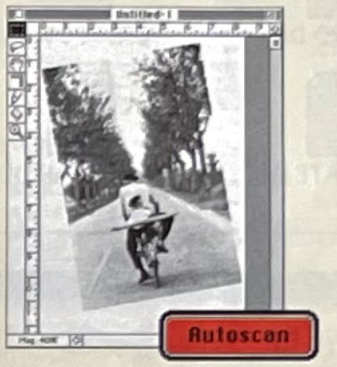

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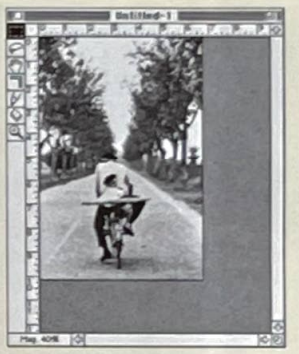

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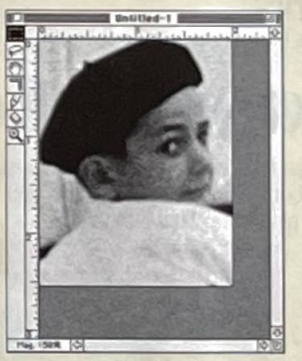

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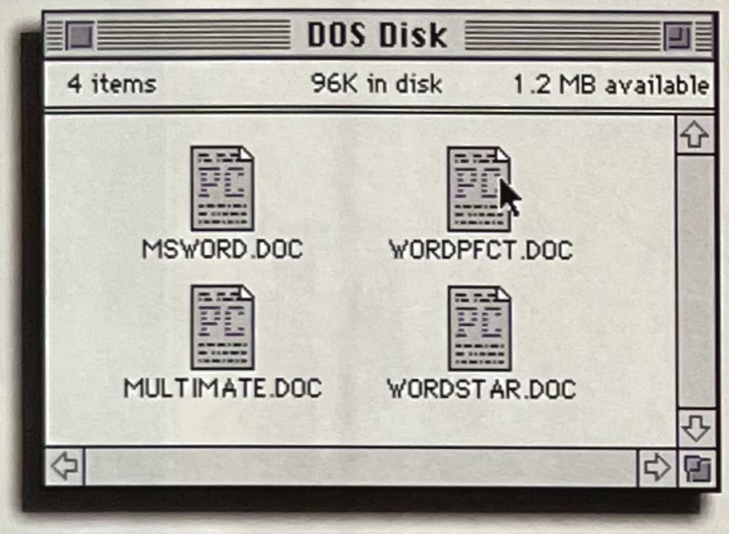

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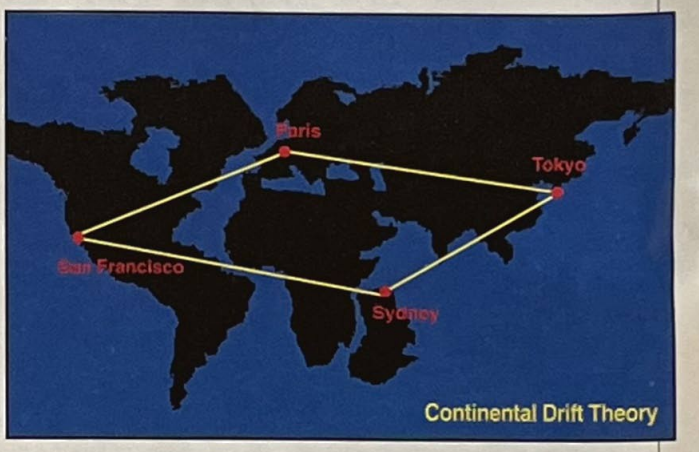

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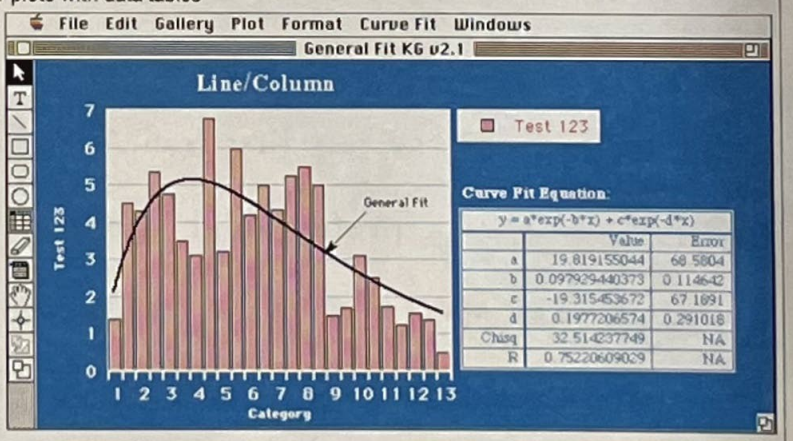

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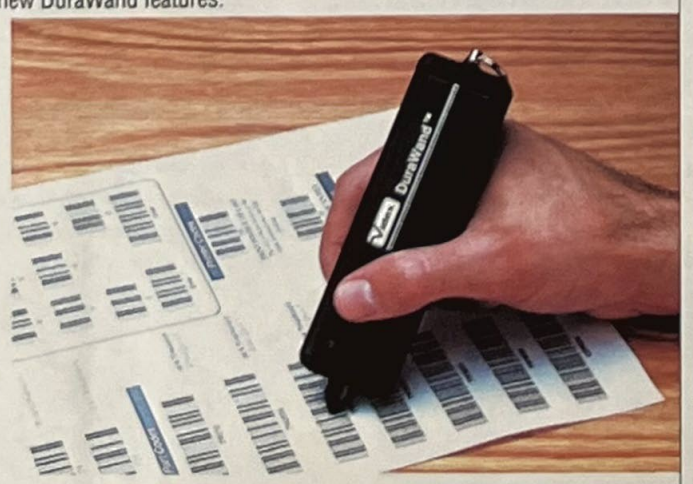

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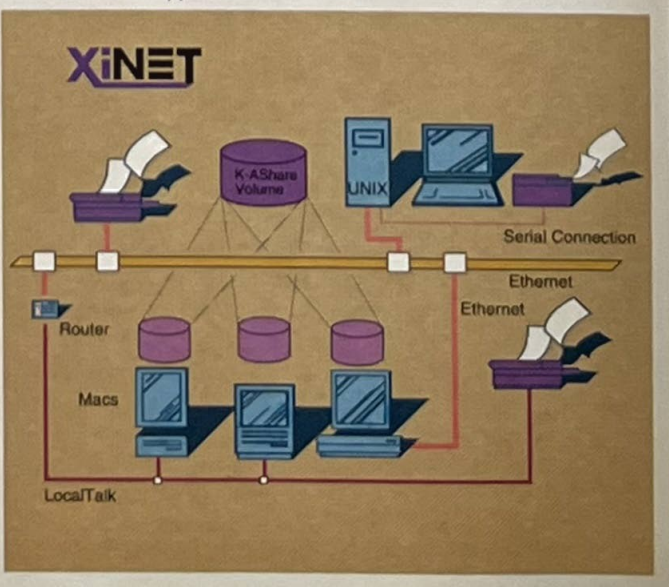

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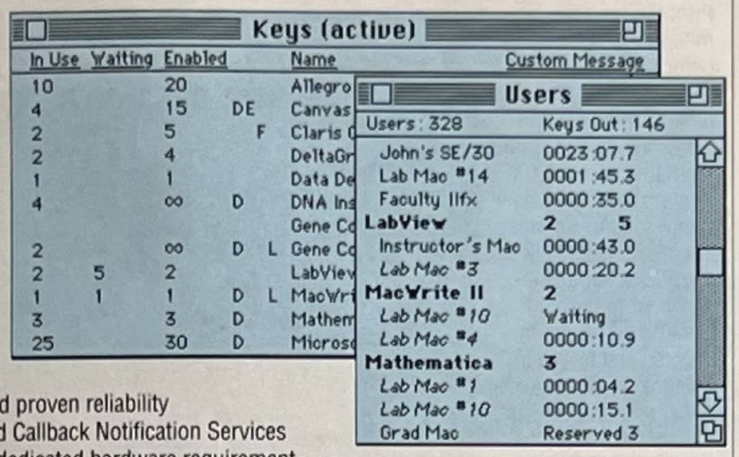

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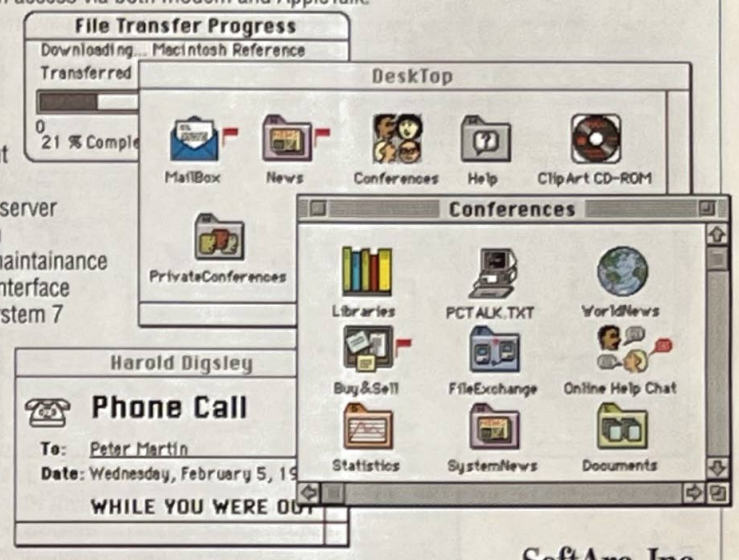

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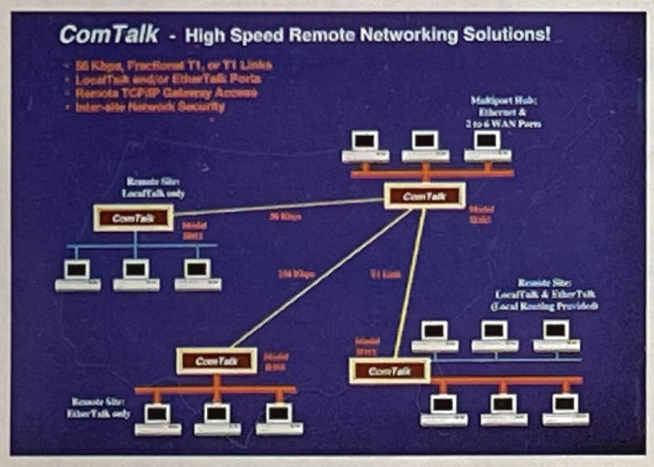
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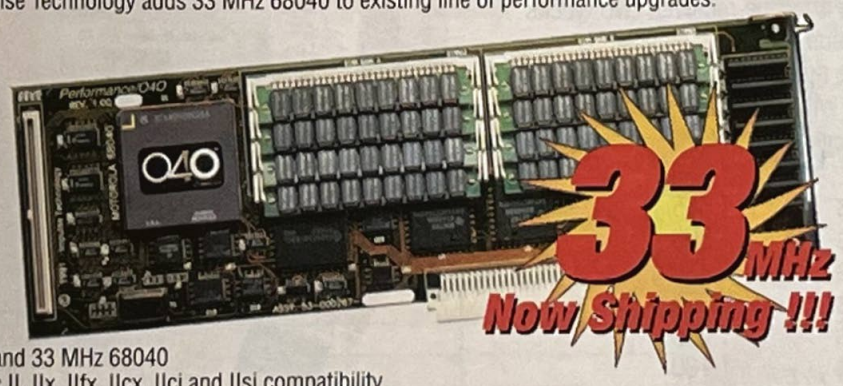

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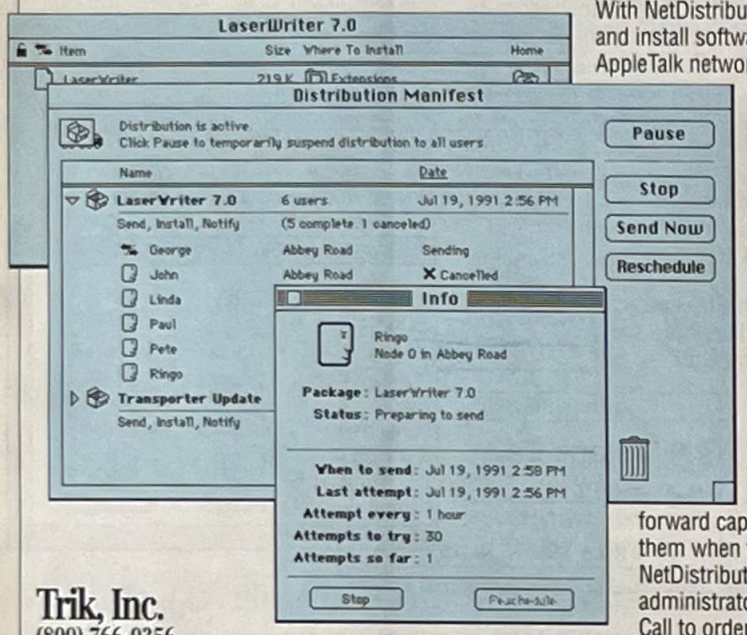

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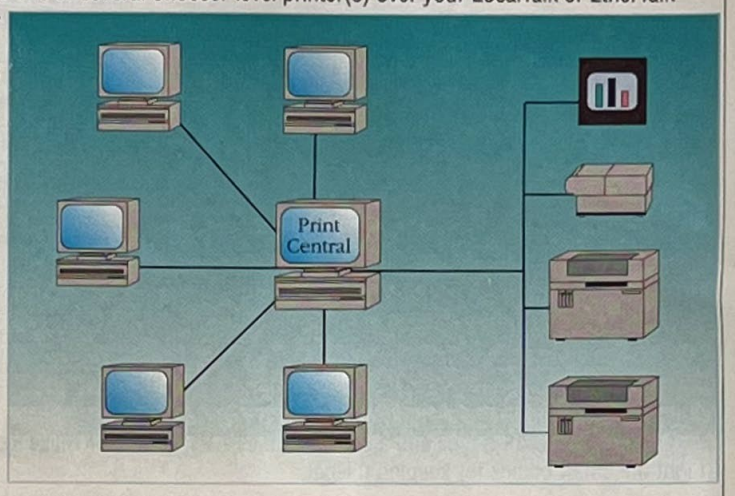

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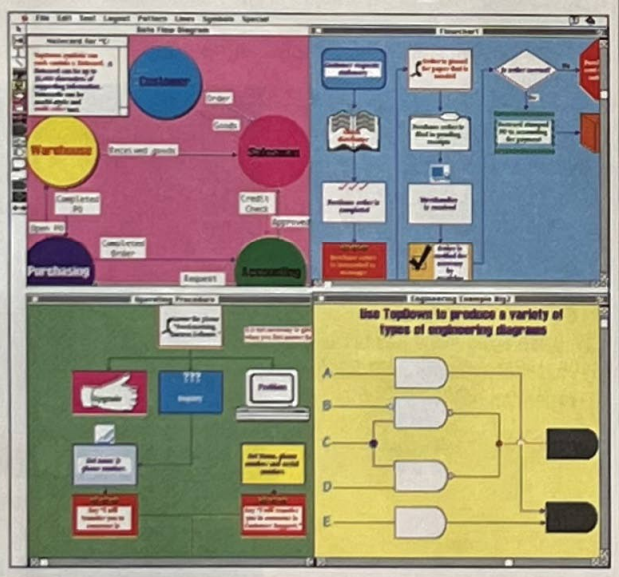

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09. Education
10. Finance: Banking, Accounting, Insurance, Real Estate
11. Health, Medical, Legal
12. Non-Computer Retailer, Wholesaler, Distributor
13. Agriculture, Mining, Construction, Oil, Transportation, Utilities

Computer Related
20. VAR/VAD
21. Retailer/Distributor
22. Systems House/Data Processing Service
23. Manufacturer (Computers, Software, Peripherals)
24. Computer Consultant
25. Other Businesses & Services (please specify) _____

2 Your Professional Title:

(Select one only.) Write Answer Here ➨

A. Chairman/President/Owner/Partner
B. VP/General Manager/Controller/Treasurer
C. Director
D. Mac/Micro Manager/Specialist/Coordinator
E. Network Manager
F. Project Manager
G. Art Director/Graphic Designer/Artist/Illustrator
H. Manager/Supervisor (not listed above)
I. Architect/Engineer
J. Systems Analyst/Programmer
K. Consultant/Advisor
L. Scientist
M. Educator
N. Editor/Writer
O. Professional (Doctor, Lawyer, etc.)
P. Accountant
R. Representative
Z. Other (please specify) _____

3 Your department/function at this *entire* location:

(Select one only.) Write Answer Here ➨

A. Engineering/Systems Engineering
B. Research & Development
C. MIS/DP/Information Systems
D. Communications/Publishing/Public Relations
E. Art/Creative Design
F. Manufacturing/Operations/Production
G. Sales/Marketing
H. Administration/Management/Personnel
I. Accounting/Finance
J. Education/Training
K. Science
L. Consulting
Z. Other (please specify) _____

4 Are there Macintoshes or other PCs listed below owned and/or planned for purchase within 1 year at this *entire* location?

☐ Yes ☐ No (Write in accurate quantity for all that apply)

		Currently Owned (Quantity)	Plan to Buy (0-12 Months) (Quantity)
MODULAR	68040 Macintosh 2		
	68030 Macintosh IIfx / IIci / IIcx / IIx 3		
	68030 Macintosh IIsi 4		
	68020 Macintosh LC 5		
	Macintosh Portable/PowerBook 6		
COMPACT	68030 Macintosh SE/30 7		
	Macintosh Classic/Classic II 8		
	68000 Macintosh SE / Plus / 512 9		
OTHER	IBM/Compatible Micro 10		
	Workstation (e.g. Apollo, Sun, NeXT) 11		

5 If your firm's primary business at this location is retailing, reselling or consulting, how many Macintoshes are sold per year?

(Answer one only.)

A. Retailer: sold per year _____ (specify quantity)
B. Reseller: resold per year _____ (specify quantity)
C. Consultant: purchased by your clients through your firm's recommendations per year _____ (specify quantity)
☐ D. Not Applicable

6 Please check the Mainframe(s) or Minicomputer(s) at this *entire* location:

(Check all that apply.)

☐ 01. VAX ☐ 02. IBM Mainframe ☐ 03. IBM Minicomputer ☐ 04. Other ☐ 99. None

7 Do you purchase, recommend, specify or approve any of the Macintosh/Compatible products listed below?

Computers
☐ 01. Macintoshes
☐ 02. Workstations
☐ 03. Minis, Mainframes

Connectivity
☐ 10. Local Area Networks
☐ 11. Modems
☐ 13. Communication/Network Software
☐ 14. Mac to PC Links
☐ 15. Mac to Mini/Mainframe Links
☐ 16. Mac to UNIX Workstation Links

Peripheral Equipment
☐ 20. Laser Printers
☐ 21. Color Printers
☐ 22. Color Monitors
☐ 23. Hard Disks
☐ 24. Backup Systems
☐ 26. Scanners
☐ 27. Input Devices
☐ 28. Removable Storage

Add-In Boards
☐ 40. Memory Boards
☐ 41. Graphic Boards
☐ 43. Ethernet Boards
☐ 44. Video Boards

Software
☐ 50. CAD/CAM
☐ 51. Graphics
☐ 52. Desktop Publishing/Fonts
☐ 53. Desktop Presentation
☐ 54. Database
☐ 55. Programming
☐ 56. Accounting, Payroll
☐ 57. Spreadsheets
☐ 59. Project Management
☐ 60. Word Processing
☐ 61. Utilities
☐ 62. Multimedia

☐ 99. None of the above

8 If you answered yes to the above computer products, for how many Macintoshes do you have this involvement?

(Select one only.) Write Answer Here ➨

01. 1000+
02. 500-999
03. 100-499
04. 50-99
05. 20-49
06. 10-19
07. 1-9
99. None

9 Please indicate the networking/communications capabilities that the Macintoshes at this *entire* location have:

(Check all that apply.)

☐ 01. Local Area Network
☐ 02. Communicate with corporate workstations, mini or mainframe computers
☐ 03. Communicate with remote mini or mainframe computers
☐ 04. Communicate with mini
☐ 05. Communicate with mainframe
☐ 06. Communicate to remote network
☐ 07. Other (please specify) _____

10 Indicate how many employees there are in your entire company:

(Select one only.) Write Answer Here ➨

01. 1000 or more
02. 100-999
03. Under 100

11 Please indicate operating systems currently in use at this *entire* location.

(Check all that apply.)

Operating Systems
☐ 01. Mac OS
☐ 02. Unix
☐ 03. System 7

LAN Operating Systems
☐ 06. Novell Netware
☐ 07. Irmalan
☐ 08. Unix/NFS
☐ 09. Sitka (TOPS)
☐ 10. 3Com 3+ System
☐ 11. LAN Manager
☐ 12. Banyan VINES
☐ 13. Appleshare
☐ 14. DEC Pathworks
☐ 20. Other (please specify) _____

12 Indicate an additional individual at this location who might qualify for a FREE subscription to MacWEEK:

Name _____ Title _____

•
Your Signature _____

Title _____ Date ___/___/___

PLEASE BE SURE THAT ALL QUESTIONS ARE ANSWERED.

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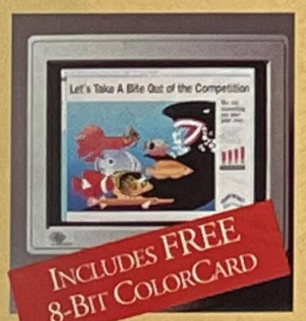

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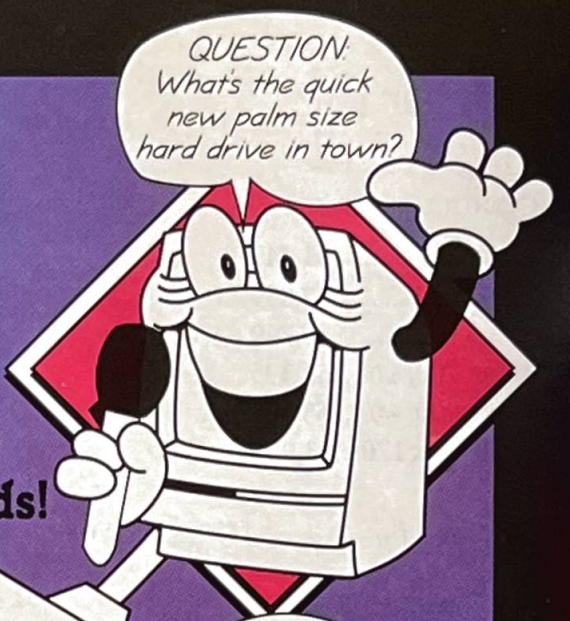

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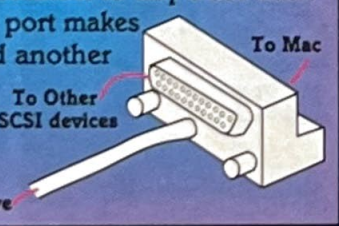

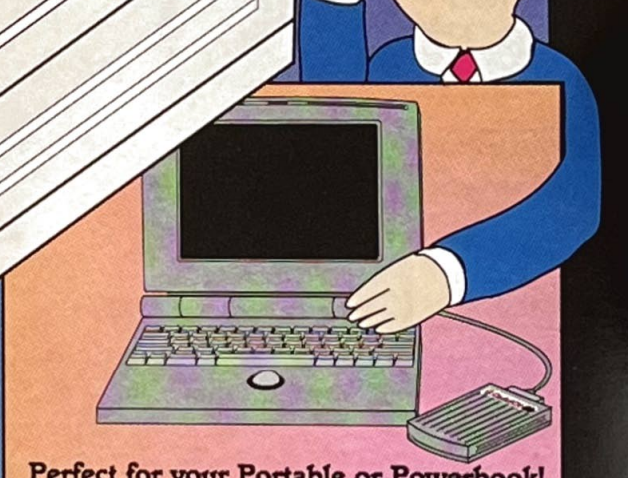

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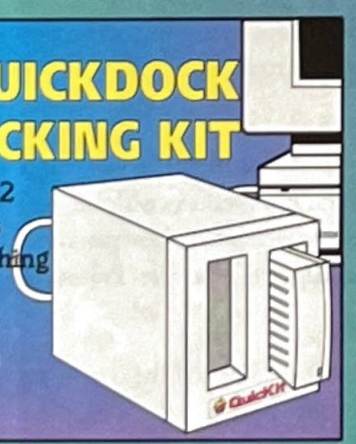

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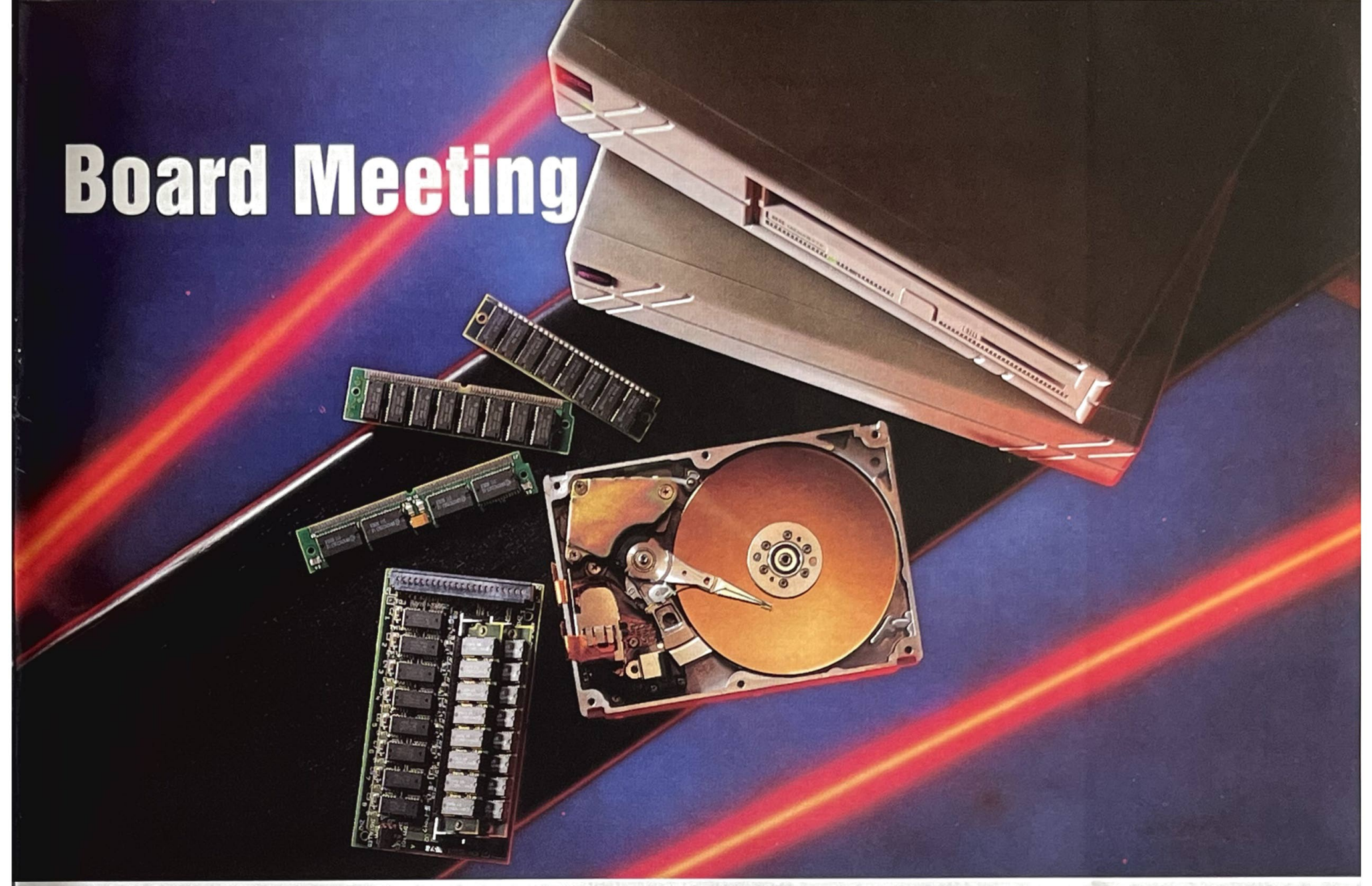

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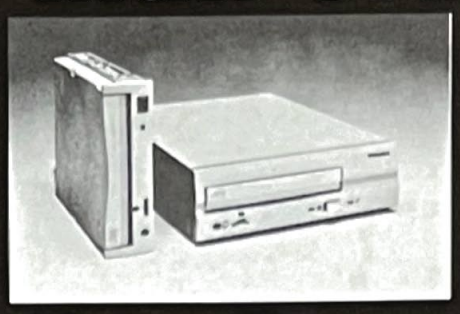
Color Pivot 8-bit System $1635.00
get 8-bit color on SE/30, LC, IIsi, and NuBus.

Full Page Pivot Display
The Full Page Display is an economical, monochrome display that lets you view a full page of text or graphics. It maintains superior contrast and focus across the entire screen. Plus, it less expensive than Apple's Solution.

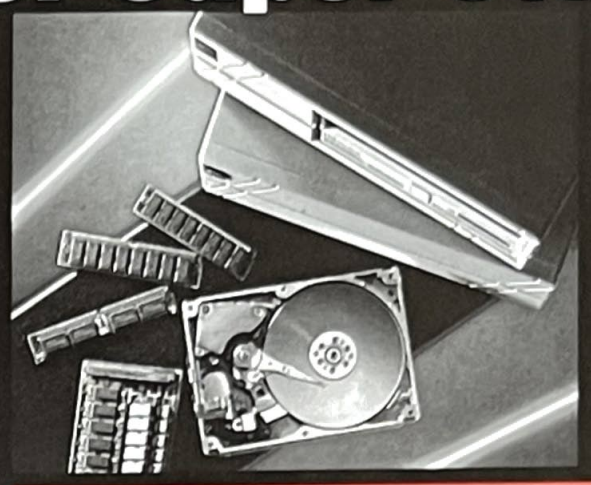
Full Page Display for Classic $875.00
this system above includes an interface card.
Full Page Display for LC $885.00
this system above includes an interface card.



CD-Rom Players are here to stay! Toshiba 3301 CD-ROM Player

$579

It has taken awhile, but CD-ROM players are here to stay. Everything that a desktop publisher needs now comes on a CD-ROM—fonts, bitmap and EPS clip-art, photo catalogs and textures. We ship the Toshiba 3301 complete. It includes driver software, CD-carrier, cables, manuals and two sampler CD's. Hey, if you are looking for the latest CD titles, call Mac and More.

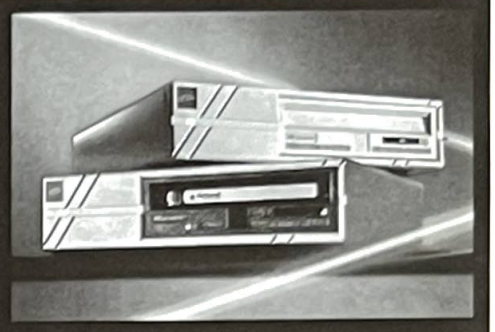


ETC Peripherals

Two Great Products Two Great Deals

ETC Peripherals provides "Innovative Products on an Economical Scale." Their recent review in the January '92 issue of MacUser backs this claim up.

SONY ETC 650 Mb Magneto-Optical Drive



Only ETC Peripherals could bring you a Magneto-Optical drive using the very popular SONY drive assembly at this price. This price includes the ETC 650 Mb M-O Drive, SCSI interface cable, external terminator block, power cord, manual, and ETC Tools 2.1.

$2995.00
ETC 650 MB M-O Drive
includes one cartridge.

FREE! Get a second optical cartridge free during this special promotion.

Features:
- Large Capacity—5.25" double-sided media for up to 650 Mbytes of formatted capacity.
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- Removability—data is stored on a lockable protective cartridge for security and easy data distribution.
- Compatibility—follows ISO/ANSI standards to assure interchangeability regardless of manufacturers.
- SCSI Interface included—nothing special to order. One price, one box. Just plug it in.
- Faster Access—70 msec average seek time is an industry leader made possible by a compact and light mobile optical block

SyQuest

$599.00

ETC 88R Removable Drive

The phones haven't stopped ringing since the review came out on this drive. The ETC 88R features a SyQuest 88 MB magnetic-cartridge drive in a zero-footprint half-height drive enclosure. Included with the drive is one SyQuest 88 MB removable cartridge, SCSI interface cable, external terminator block, power cord, manual, and ETC Tools 2.1.

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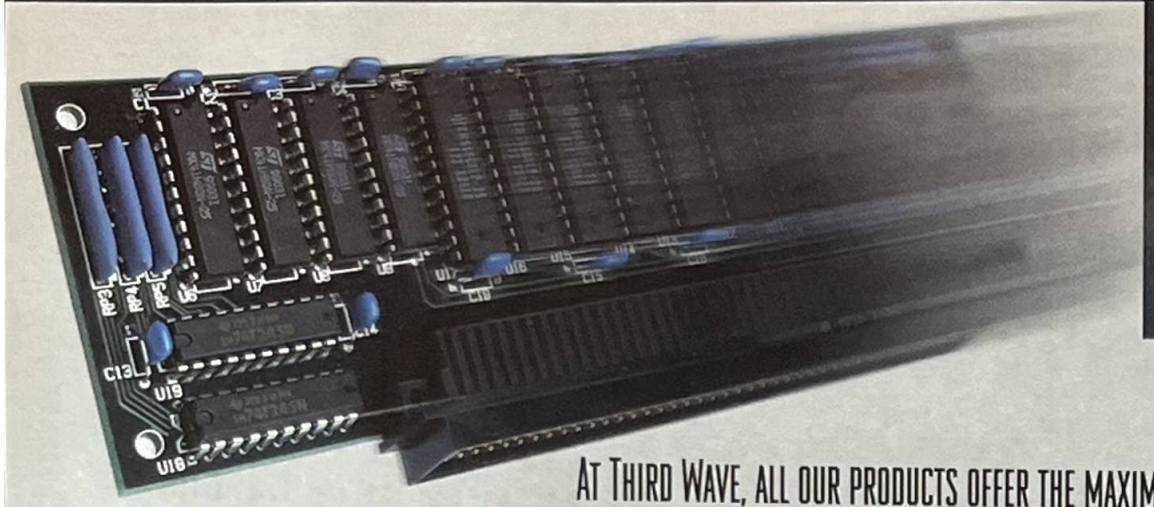

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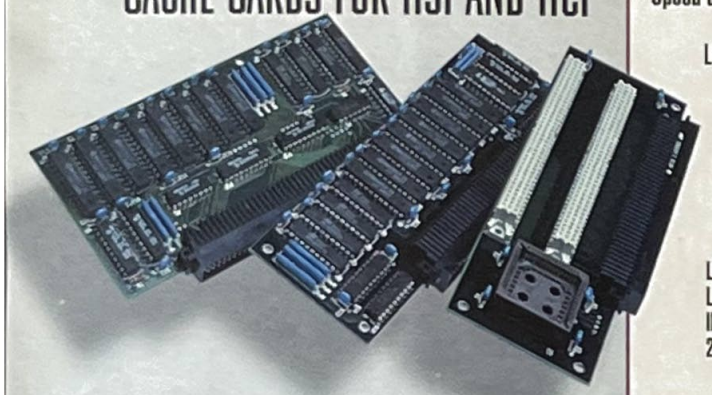

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LogiCache IIci	159.00
LogiCache IIsi	169.00
IIsi Dual Slot Adapter	59.00
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TokaMac 040 Accelerators rated faster than the Quadra in three out of four benchmarks. MacWeek—10/22/91

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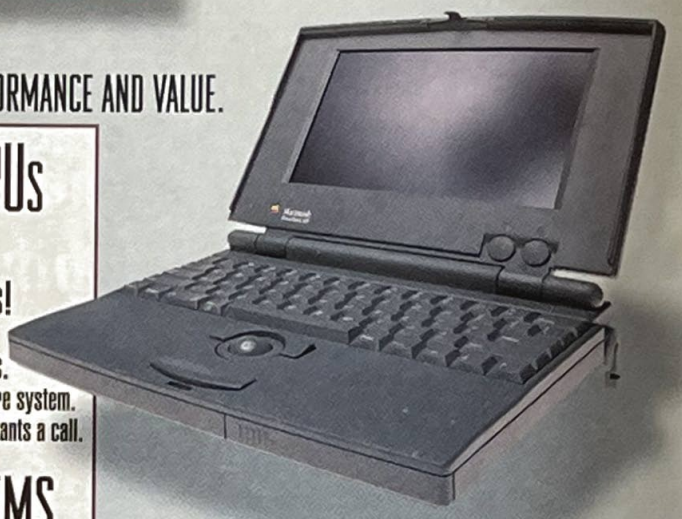

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Drive Prices guaranteed to be at or below listed prices. Call for latest.

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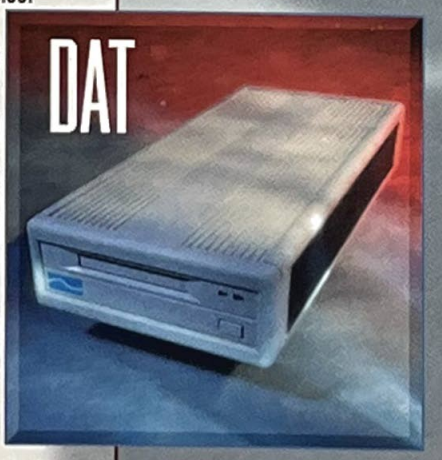

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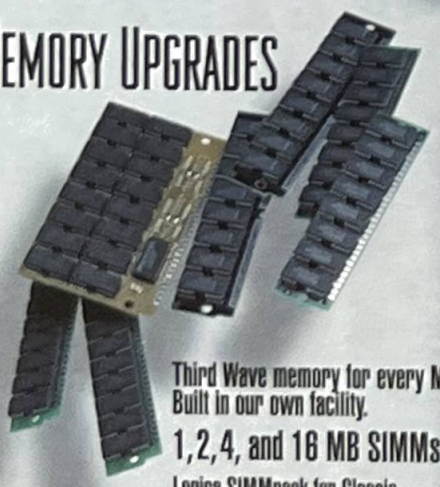

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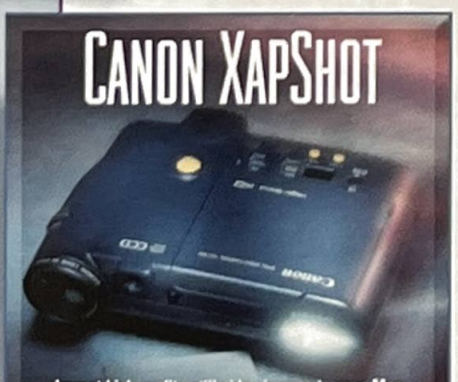

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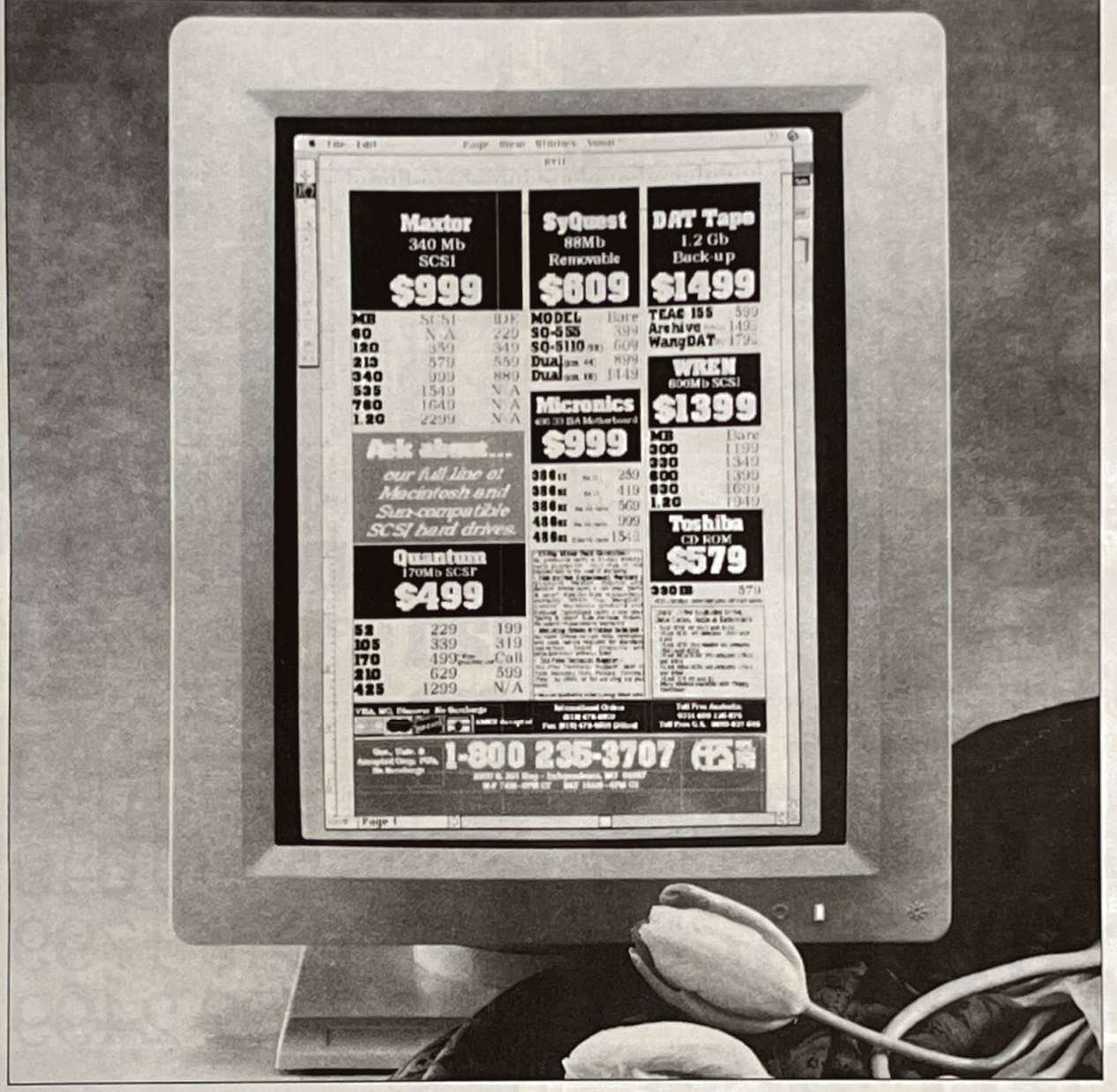

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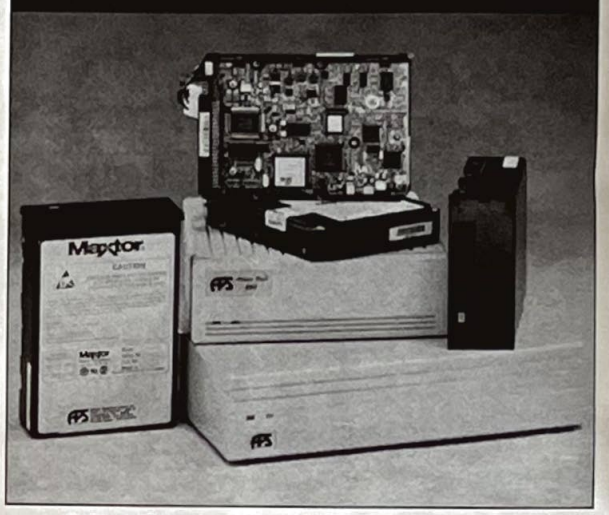

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1.2G	1949	2099

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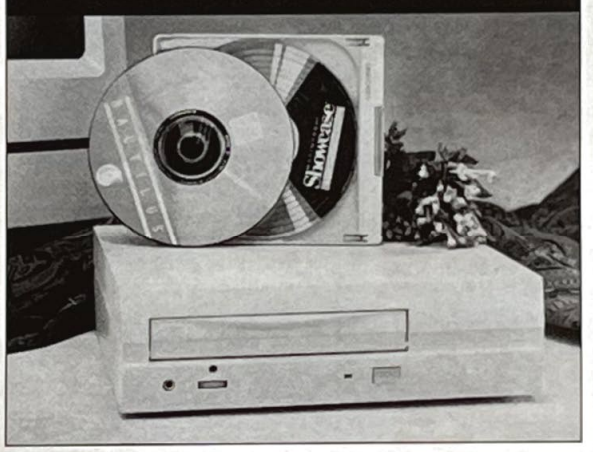

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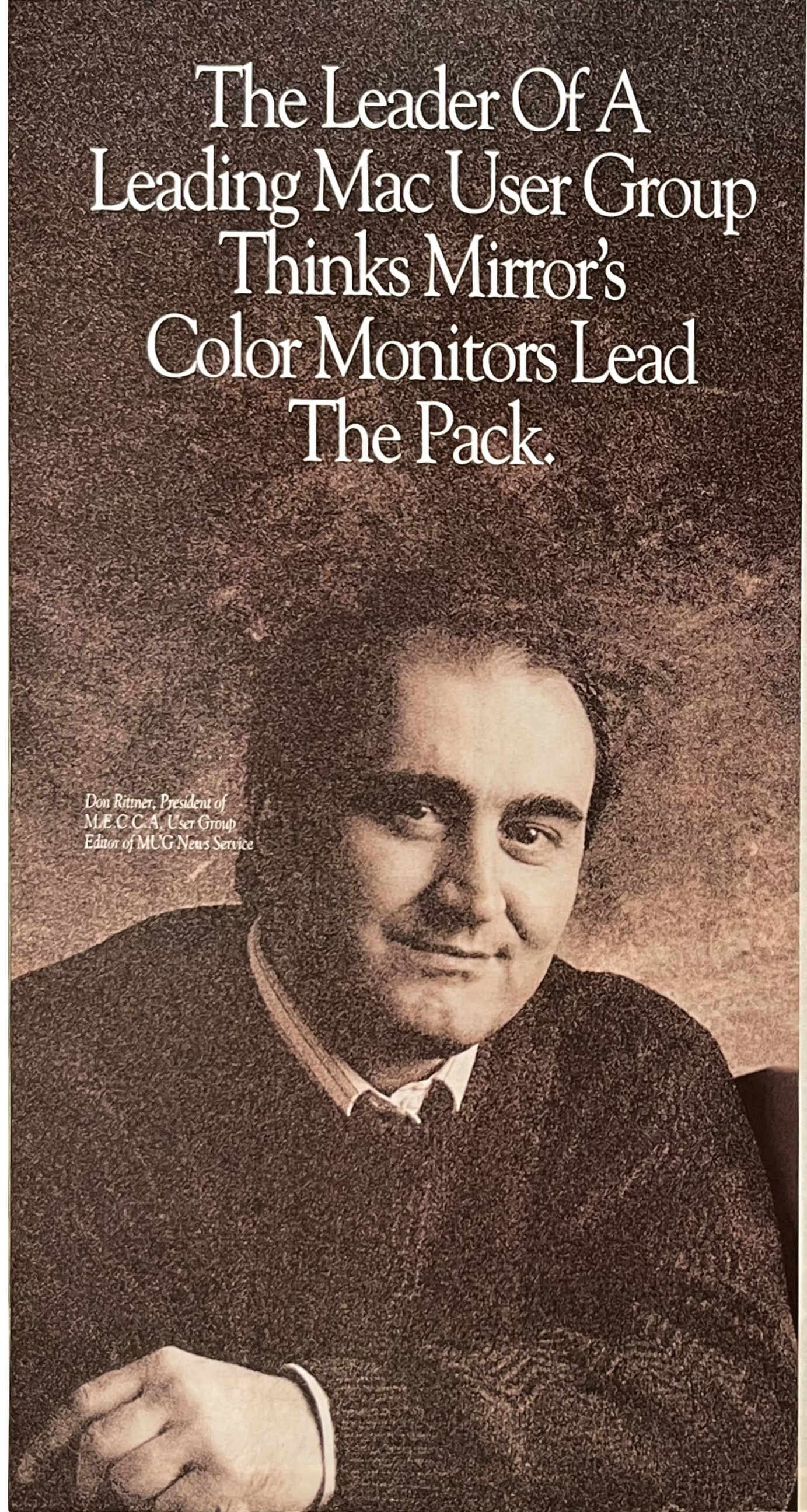

Don Rittner, President of M.E.C.C.A. User Group Editor of MUG News Service

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UMax

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MacUser ★★★★

24-bit Color & True 600 dpi, with Adobe PhotoShop 2.0

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Prices valid 2/20/92 – 2/26/92

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STRAIGHT FROM THE MANUFACTURER. MacTel Technology Corporation is a global company specializing in the design, manufacture and distribution of a wide array of Macintosh peripherals. State-of-the-art production, research and testing assures the finest quality. Buying direct assures you savings and service!

VisionPro Color Monitor Systems

- VisionPro Ikegami System
  8-bit SP 20" Trinitron $2497
  24-bit SP 20" Trinitron
  Editors' Choice, MacWorld 1/92 ..... $3349
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  8-bit SPS 20" Sony Trinitron (GDM 1936) $3297
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- Sony 16" Trinitron $1297
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- Sony 20" GDM 1936 Trinitron $2497

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A TRACE OF GOLD

Only MacTel Technology manufactures SIMMs for the Mac w/gold contacts, traces & leads. Immune to oxidation & corrosion, gold is the most efficient & effective conductor in existence. Each surface mounted SIMM tested, coded, backed with lifetime warranty!

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- 2 Mb, 70/80 ns $84
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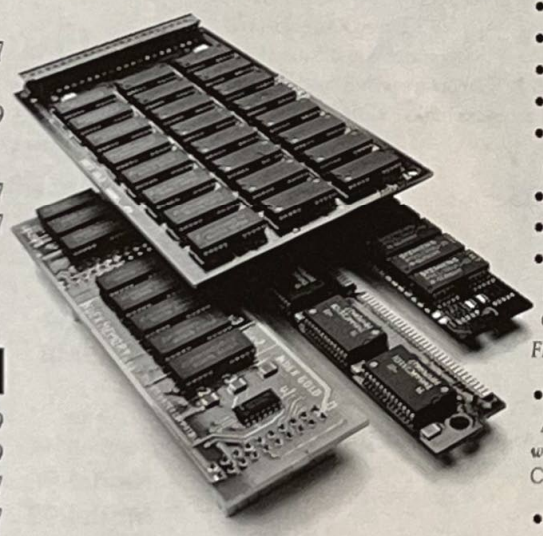
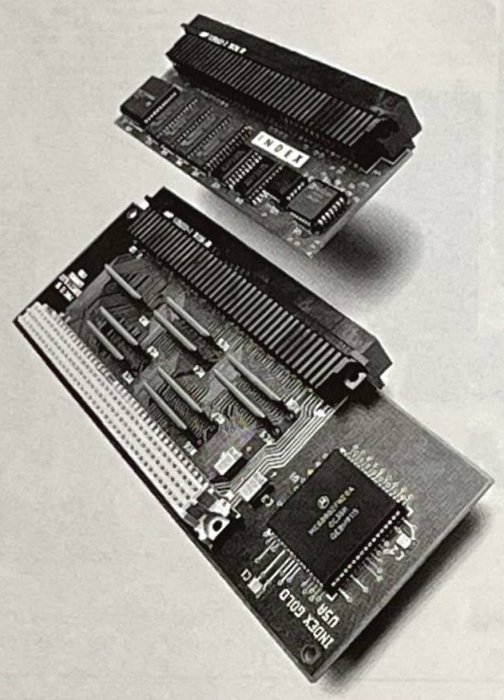
- 4 Mb 70/80 ns Index Gold™ $139





- 8 Mb 70/80 ns $499
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- PowerBook 4 Mb (100/140,170) $575
- PowerBook 6 Mb (100/140,170) $797
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425 Mb, 12 ms	$1397	$1449
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Special price on our 24-bit VisionPro Ikegami System!
Includes: 24 bit color card
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MACWORLD 1/92, ON THE VISIONPRO MONTIOR SYSTEM:
" ...a surprise bargain...the [VisionPro] show beautiful, rich colors, and sharp text."
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- PowerBook 100 2/20 ..... CALL
- PowerBook 140 4/40 ..... CALL
- PowerBook 170 4/40 ..... CALL

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Index ADB keyboards have a 105-key layout, 15 function keys, cursor control keys & number pad. Foreign language keyboards are bundled with their respective system software.

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VOLUME DISCOUNTS

Why your next Apple computer should be a RealTech notebook.

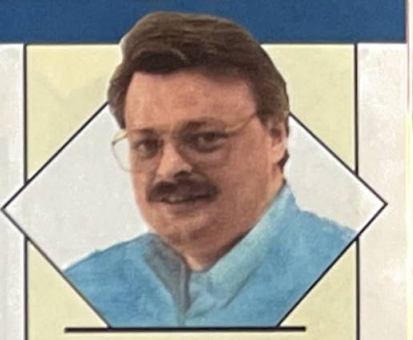
See our mail order ad for other GREAT VALUES!

6 reasons you should own a RealTech TRAVLER:

- *8 Mb of RAM*
- *80 Mb hard drive (Apple's 170 only has 40 Mb)*
- *25 MHz 68030E*
- *Math coprocessor*
- *6.25 lbs.*
- *8.5" x 11" x 2"*

FREE! Includes DayMaker software ...a $99 value!

Only $3495!



"My ad agency got really mad at me about this notebook computer.

Like me, they're very excited about the benefits—and price—of the RealTech TRAVLER. We'd spent a lot of time thinking about what you'd want in a notebook computer, and in figuring out how to improve what was already on the market.

To make a long story short, we achieved our goal. The RealTech TRAVLER is more powerful than the Apple PowerBook 170; it has more RAM, a bigger hard drive, and more standard features. All that, and it's priced over $1000 lower!

So why is my ad agency mad? Because I wouldn't give up our prototype to be photographed. (We only had one TRAVLER in hand when we began work on this ad.)

In less than a week, I became so attached to my TRAVLER that I wouldn't give it up, even for a day. I do a lot of traveling, and it quickly became indispensable. I made the agency wait 'til TRAVLERs were rolling off the line, then sent the agency one to shoot for this ad.

Now I have another problem...I can't get the agency president to return it. After she used it for a day, she was hooked, too!"

Réel Provencher
President
Hardware That Fits

P.S. As on all RealTech products, I offer a 30-day money-back GUARANTEE. If you're not happy with it, I'll buy it back!

Real Tech™ **TRAVLER**

Don't judge a book by its cover!

	RealTech TRAVLER 880*	Apple PowerBook 170
Price	$3495	$4599
Pros	Motorola 68030E 25MHz	Motorola 68030 25MHz
	8 Mb RAM (upgradable to 14 Mb)	4 Mb RAM (upgradable to 8 Mb)
	80 Mb hard drive	40 Mb hard drive
	Math coprocessor	Math coprocessor
	1.44 Mb SuperDrive compatible	1.44 Mb SuperDrive
	SCSI port	SCSI port***
	Camcorder battery (3 hours)	NiCad battery (3 hours)
	Backlit LCD display	Backlit active matrix screen
	640 x 480 resolution	640 x 400 resolution
	SCSI cable included**	2400 baud modem/9600 send fax
	DayMaker software ($99 value)	—
Cons		Very expensive
		Limited to 8 Mb RAM
		Costly accessories
		***Needs special SCSI cable sold only by Apple

TRAVLER 880 (8 Mb RAM, 80 Mb HD) — $3495
TRAVLER 1480 (14 Mb RAM, 80 Mb HD) — $3995

**Connects to other computers via SCSI port for data transfer

TAKE IT...OR LEAVE IT.

Packed with double the value of Apple's PowerBook 170...

This is a real computer that will work in the everyday real world, not just in somebody's lab. We put in enough memory and hard drive to meet your needs today *and* tomorrow. The *RealTech TRAVLER 880's* high-speed, high-capacity 80 Mb hard drive, 8 Mb of RAM and 1.44 Mb floppy drive make reading, loading and transferring files fast and easy. It even uses an easy-to-find camcorder battery, which can recharge while the *TRAVLER* is in use.

8 Mb of RAM & 80 Mb hard drive!

The *RealTech TRAVLER* has 8 Mb of RAM, upgradable to 14 Mb (nearly double the RAM of the Apple PowerBook 170)... enough memory to run almost any Macintosh program. (The *TRAVLER 1480* has a whopping 14 Mb of RAM!) And with its high-speed, high-capacity 80 Mb hard drive, there's plenty of storage.

Can be connected to any Macintosh desktop computer.

Unlike the Apple PowerBook 170, the *RealTech TRAVLER's* SCSI port and cable (included free) make it easy to connect to any Macintosh computer with a SCSI port. Upon start-up, the *TRAVLER's* hard drive and floppy will appear directly on your Macintosh desktop, just like any other hard drive or floppy. You no longer need to maintain two versions of each file (one for the desktop Macintosh and one for your notebook), since all of your files will permanently reside in the *TRAVLER*. When you're ready to leave the office, just shut down the desktop Macintosh, disconnect the *TRAVLER's* SCSI cable, and you're on your way. No more disk swapping to maintain your files.

Takes the place of a Mac IIci. So you only need one computer, not two.

Now you only need one computer for office and travel, and only ONE set of datafiles! The *RealTech TRAVLER* is so powerful it can double as your desktop computer. When you add an optional full-page display or 21" dual-page display, mouse, and keyboard, its specifications are comparable to a Mac IIci. So why would you buy one of those when you could own a *RealTech TRAVLER* that you can take with you?

The RealTech TRAVLER is fully authorized by Apple Computer, Inc.

It's the best portable solution available. *When has the decision to buy a computer ever been such an open and shut case?*

All trademarks are the property of Apple Computer, Inc. and MBSI.

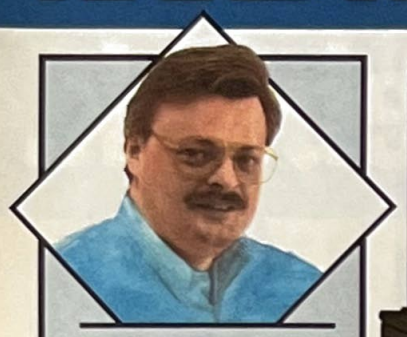
HARDWARE THAT FITS

Call: 409-760-2400
FAX: 409-539-4141

Prices subject to change. RMA # required for returns.

1-800-972-3018

HARDWARE THAT FITS If you don't like it,



"I've been in this business for six years, and I've NEVER been this excited about printers!

PostScript® Level 2 is the next generation of Adobe's page description language. It contains a number of significant performance and print quality enhancements, and is compatible with all current applications which support the PostScript® language.

Best of all, the time-saving features of PostScript® Level 2 are available RIGHT NOW in our RealTech Laser and RealTech Laser 400:

• **IMPROVED MEMORY MANAGEMENT.** One pool of memory is available for all resource needs. Dynamically allocated and automatically reclaimed; no arbitrary memory restrictions exist. Better disk space management eliminates fragmentation and improves transfer of information from hard disk to RAM.

• **ATM FONT RENDERING TECHNOLOGY.** Raw characters are built 4 to 5 times faster.

Features available through software applications:

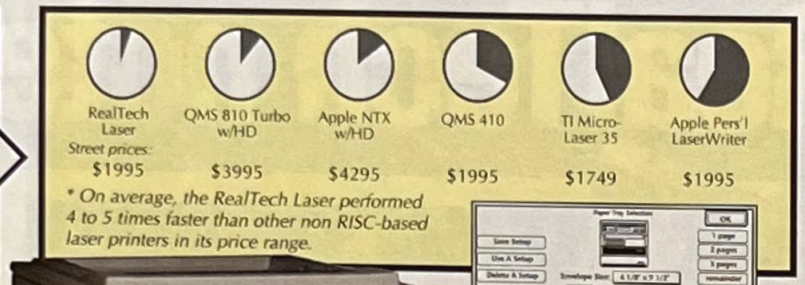
• **COMPRESSION.** Reduces transmission time by sending compressed files directly to the printer.

• **FORMS SUPPORT.** You can define a base form whose representation stays cached in the printer.

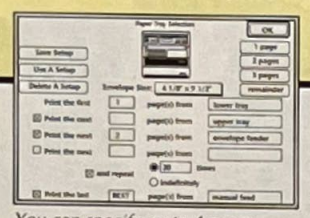
• **COMPOSITE FONTS.** Handles very large character sets and non-horizontal writing modes."

Réal Provencher

President
Hardware That Fits



** On average, the RealTech Laser performed 4 to 5 times faster than other non RISC-based laser printers in its price range.*



You can specify up to 4 paper changes without moving anything but your mouse!

RealTech Laser

Only $1995!

2 Mb RAM, upgradable to 10 Mb! *The only printer of its kind with this much RAM and hard disk expansion capability.* Includes a SCSI port for a hard disk. The RealTech Laser includes 35 resident PostScript® typefaces. Compact design (only 33.5 lbs.; measures 13.4"W x 14.2"D x 10.9"H).

WINNER MacWEEK 1991

POSTSCRIPT® Software From Adobe LEVEL 2

500% faster!*

- RISC processor
- 2 paper trays
- 9 pages/minute
- SCSI port

PC-compatible; its 3 interface ports can be used at the same time. Includes Appletalk® RS-422, IBM PC parallel, and RS-232-C serial interface ports (can be assigned either PostScript® or LaserJet II commands). Auto switches between interfaces, and spools files on a real-time basis. A Hewlett-Packard LaserJet Series II emulation allows use with non-PostScript® applications software.

The RealTech Laser and RealTech Laser 400 were specifically designed for sophisticated graphics and font-intensive applications. For speed and performance, they're based on a RISC-based (Reduced Instruction Set Computing) processor and PostScript® Level 2 software from Adobe.

TWICE THE PRINTER.
400 dpi, 11x17 printer

High speed!

- RISC processor
- 16 ppm (letter size)
- 8 ppm (11x17)
- SCSI port
- 2nd paper tray

RealTech Laser 400 **Only $4495!**

4 Mb RAM, upgradable to 16 Mb! Prints 400 dpi, or high speed (16 ppm) at 300 dpi. 35 resident PostScript® typefaces. Compact design (20.25"W x 16"D x 11.75"H) weighs 80.5 lbs. 20,000 pages/mo. duty cycle. Call for other technical specifications.

Adobe® and PostScript® are registered trademarks of Adobe Systems Incorporated.

Affordable printing...
from Texas Instrument's compact PostScript® printers.

$1939

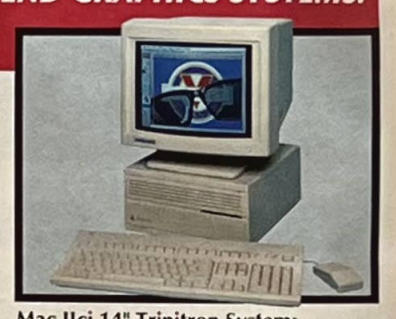
TI TurboLaser™. 300 dpi with Adobe PostScript Level 2 and RISC-based processor. 2.5 Mb RAM. Nine pages per minute; 35 resident fonts; 10,000 pages per month duty cycle. Optional accessories: 2nd paper tray, SCSI interface.

$1249

TI MicroLaser™ Plus. 300 dpi with HP LaserJet Series II emulation standard. 1.5 Mb RAM. Nine pages per minute; 17 resident fonts; 3,000 pages per month duty cycle. Optional accessories: 2nd paper tray, separate envelope tray.

WE SPECIALIZE IN HIGH-END GRAPHICS SYSTEMS!

Mac IIsi 14" Trinitron System:
5 Mb RAM, 105 Mb Quantum, Mac-Pro Plus Keyboard.....3629



Mac IIci 14" Trinitron System:
5 Mb RAM, 105 Mb Quantum, Mac-Pro Plus Keyboard, Cache Card ...4215

Mac IIfx 19" Trinitron System:
1 Floppy Drive, 8 Mb RAM, 303 Mb MicroNet Hard Drive, 24-bit Color Monitor and Video Card, MacPro Plus Keyboard.....8895

Mac IIci B/W 21" Dual-Page System:
5 Mb RAM, 105 Mb Quantum, MacPro Plus Keyboard 4595

Seiko/RasterOps 24-Bit Bundle **$979**

High-resolution Trinitron tube...view 16 million shades of color! 640 x 480 resolution, 72 dpi. 14" display has integrated tilt & swivel base. Includes RasterOps 24S video card. ***It's 43% brighter than the leading competitor!***

RasterOps CONNECTION

We've been an authorized RasterOps dealer for over 3 years, and can support them with top-quality service and warranties.

ColorBoard 24S	379
ColorBoard 24SI	669
ColorBoard 24XLi	2349
ColorBoard 24STV	1199
ColorBoard 24XLTV	2689
ColorBoard 264SE/30	599
ColorBoard 8LC	599
ColorBoard 8XL	469
CorrectColor Calibrator	2019
ImagePak Still Compression	335
TV Tuner	335
14" Trinitron 24-bit	979

RasterOps 24XLTV 21" Color System **$5819**

The latest in 24-bit technology. Live video and on-board acceleration, 16.8 million colors, 72 dpi, 75 Hz refresh rate. A full two pages of vibrant color!

FAX: 1-409-539-4141

All prices are subject to change without notice.

Our buying power gives you YOUR

we'll buy it back! VISA MasterCard BBB 1-800-972-3018

RealTech Dual Page 21" Display **$995**

No more squinting and scrolling! Flicker free monochrome technology...true WYSIWYG! 21" landscape display with 1152 x 870 resolution, 74 dpi. Vertical refresh rate of 75 Hz, full gray scale capability, and flat CRT (P4 phosphorus, polished screen). One-year warranty.

CPU	Monitor	Price
Mac SE	Mono	$995
Mac II, IIcx, IIci IIx, IIfx, SE30	Mono GS 256	995 1479
Mac IIsi	Mono	1059

RealTech Full Page Display

$579

Quality, flicker free images at a price that lets you experience the convenience of large screen viewing.

15" portrait display has 870 x 640 resolution, 80 dpi. Vertical refresh rate of 74 Hz, full grayscale capability, and flat CRT, (P4 phosphorus), polished screen. One-year warranty.

CPU	Monitor	Price
Mac II, IIcx, IIci, IIx, IIfx, SE, SE/30	Mono	$579
Mac II, IIcx, IIci IIx, IIfx	GS 256	1079
Mac IIsi, IIci	GS 16	495

$1399

Microtek 600 DPI Scanner

Scanmaker 600ZS Color Scanner includes Adobe Photoshop — full version, with 24-bit color editing and color separation capabilities.

High-resolution color scanner capable of scanning 16 million colors at up to 600 dots per inch. Outstanding image quality in a compact, flatbed design.

- 16.8 million colors
- 3 scanning passes (red, green and blue filters)
- 14 brightness settings for each color plane
- Scanning speed 150 seconds

Call for special pricing

Microtek Scanmaker Slide Scanner.

The affordable 35mm color slide scanner. Scans landscape or portrait slides at 1850 dpi. Captures 24-bit color and 8-bit grayscale. Bundled with PhotoShop, you'll be able to produce 4-color separations from your color slides. A great scanner at a great price!

INTRODUCING *the RealTech Trinitron*

RealTech Trinitron Systems **$2899!**

The monitor solutions that break the price barrier for 19" Trinitrons!

Our **24-bit system** includes the RealTech RT-24 video card with pan-zoom and extended desktop and G-world support. Socketed for up to 16 Mb of RAM! State-of-the-art engineering. On-board QuickDraw acceleration, 75 Hz vertical refresh rate. View 16.8 million colors at 72 dpi! 1024 x 768 resolution. Our **8-bit system** includes the RealTech RT-8 video card...an affordable 19" color system!

CPU	Monitor	Price
Mac II, IIx, IIcx, IIsi*, IIci, IIfx, SE/30, LC, Quadra 700 & Quadra 900	8-bit system	$1899
Mac II, IIx, IIcx, IIci, IIfx, Quadra 700 & Quadra 900	24-bit system (accelerated)	$2899

**IIsi solution retains PDS slot for the RealTech cache card.*

WE ONLY SELL NAMES YOU CAN TRUST

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PLI (Peripheral Land)

Infinity Turbo 44	629
Infinity Turbo 88	829
Quick SCSI w/cable	349

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Reliable drives backed by a two-year warranty.

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Q 105LP	369
Q 210S	709
Q 425S	1389
External Hard Drives	
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Q 105LP	455
Q 210S	795
Q 425S	1475

WACOM TABLETS

Electrostatic 12 x 12	859
Electrostatic 12 x 18	1249
Standard 12 x 12	779
Standard 12 x 18	1169
Standard 6 x 9	549

Choice of stylus or 4-button cursor. CALL FOR OTHER SIZES AND TYPES.

ZOOM MODEMS

Zoom 2400	75
Zoom 2400 w/send/receive	119
Zoom V.42 bis	139
Zoom 9600 V.32/V.42 bis	419

REALTECH CACHE CARDS

"...cache cards are simple, efficient, cost-effective enhancements for an already speedy Mac."
— *MacUser, June 1991*

IIci Cache Card	159
IIsi Cache Card	169
IIsi Adapter	59
Classic Memory Board	39

7 REASONS TO ORDER FROM US *(besides saving money!)*

1. **30-DAY MONEY-BACK GUARANTEE** on all hardware (except for special-order items). *If you're not satisfied with what you buy from us, just call. We'll refund your purchase price (minus consumables, for printers).*
2. **Toll-free tech support** when you need it.
3. **Pay when shipped...** We charge your credit card when your order is shipped — not when you place the order.
4. **Overnight delivery** when you need it.
5. **Business leasing available.**
6. **Installation & training** anywhere in the continental U.S.
7. **We use Macs every day!** We truly understand your challenges.

* Before returning merchandise, we must ask that you call our Customer Service Dept. at 1-800-972-3018 to receive a returned merchandise authorization number (RMA). This number must be included with any products you return. No C.O.D. returns, please. Thank you for your cooperation.

A NOTE FROM THE PRESIDENT:

"We demand that the products we sell are backed by absolute top quality, service and delivery. When our suppliers don't provide that, we search for sources that will meet your (and our) highest expectations. We've combined forces with Applied Engineering and Fusion Data Systems to offer the best products on the market."

Réal Provencher

APPLIED ENGINEERING

Applied Engineering is Apple's oldest 3rd-party developer. For 12 years they've sold and installed more products for Apple computers than any other company except Apple. Their technical services department has over 70 years of combined experience working on Apple products.

AFTER SELLING 1,000,000+ UNITS... THEY'RE SIMPLY THE BEST IN THE BUSINESS!

TransWarp NuBus 68040-25MHz	**1929**
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TransWarp LC-40MHz	969
HD Superdrive 1.44	215
QuadraLink	189
FastMathLC	155
LC Heavy-Duty Power Supply	99
Quick Silver	219

FUSION DATA SYSTEMS

TokaMac 68040 Accelerator Boards

Highest performance upgrade available for the IIci, IIsi, SE/30 or LC. TokaMac runs applications up to 300% faster than a IIfx!

Provides significant productivity improvement to users whose primary applications include CAD, multimedia, graphics, modeling, simulation and analysis, animations, spreadsheets, and heavy (number-crunching) routines. Processes at 20 MIPS and 3.5 MFLOPS. System 7.0 compatible; no re-booting required.

TokaMac CI	2149
TokaMac SX (SE/30 and Si)	2019
TokaMac LC	1879

THE NETWORKING CORNER

We know networking...try us!

We've run our entire business on Macs, and have dealt with networking issues for more than five years. We know from experience how they work. If you already have a sticky network issue, give us a call. We're happy to help.

ASANTÉ

Asanté continues to lead the pack with quality Ethernet products at affordable prices...if you don't know whether you need 16 or 64K call us; we'll tell you!

10T Hub	669
16K Cards (all machines)	199
64K Cards (all machines)	255

CAYMAN SYSTEMS

GatorBox	2015
GatorPrint	399

CABLING

Hypernet Din 8 Connectors	27
Hypernet DB-9 Connectors	27

FARALLON

Star Connector	17
Star Connector EN	131
Star Controller	865
Star Controller EN	1709

DAYNA

DaynaPORT-T	199
DaynaPORT-T w/FP	299
EtherPrint	335
EtherPrint Plus	605

SHIVA

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Fastpath 4	2079
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NetModem 9600 v.32	1249
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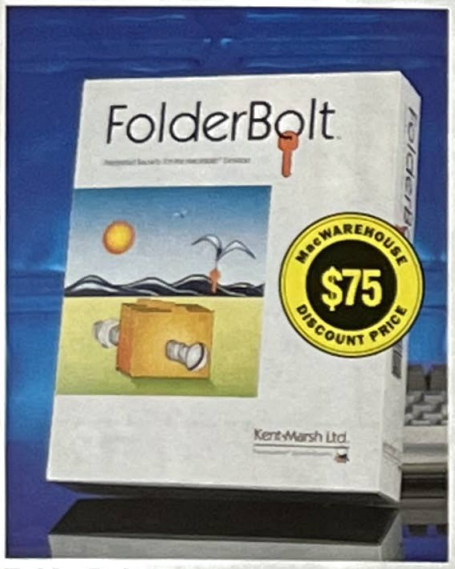
THE CORPORATE SOLUTION

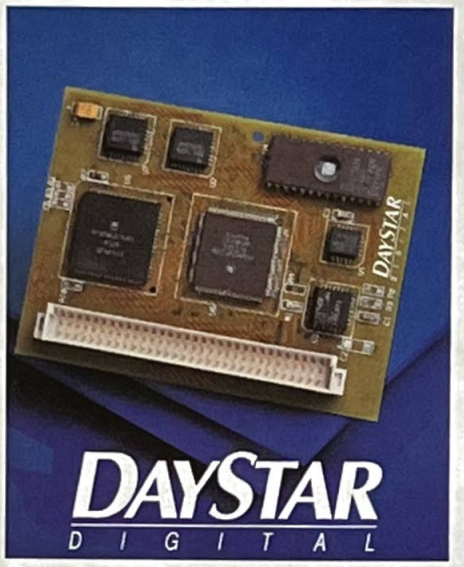


FolderBolt

(Kent Marsh) "FolderBolt compliments the desktop...Subtle yet sensible...Takes the edge off security...Redefines standards." MacTutor July 1991. Simply shift-click to create completely locked folders, read-only folders, or drop folders. Once locked they can't be opened, duplicated, deleted or moved until you double-click & provide the password. Features complete unlocking at start up, activity logging, and locking at shutdown. Includes full administrator override. FolderBolt is a welcome addition to the Mac security arsenal MacWeek June 1991. The only desktop security that's System 7 Savvy. **UTI0212** ***FaxFACTS 6549***

After Dark/More After Dark Bundle

(Berkeley Systems) **After Dark 2.0** displays over 35 screen savers including Flying Toasters and Fish!. Many modules include sound effects. SystemIQ monitors activity so that After Dark won't slow down long file transfers, database sorts, or backups. Password protection maintains your privacy when you leave your machine. **More After Dark** has over 25 fascinating new displays. It includes the Virex-D virus detector module, plus Mowin'Man, Tunnel, GraphStat, and many beautiful fish. Crazy Kittens, Art Museum, and Lunatic Fringe game module will entertain you and prevent screen burn-in. (Requires After Dark software) **UTI0231** ***FaxFACTS 6564***



Equalizer LC

(DayStar) Have all the memory you want, 10, 20,100 MB or more, all for one price! Run Apple's own System 7 virtual memory. DayStar puts a 16 MHz 68030 processor in your 68020 based Mac LC. The optional math chip is great for spreadsheet recalcs and math/science programs. Special Powermath software adds even more of a boost to many other math functions. Buy today, and you can always upgrade to the faster PowerCache accelerators! **DRI0497 w/o 68882** ***FaxFACTS 4911***

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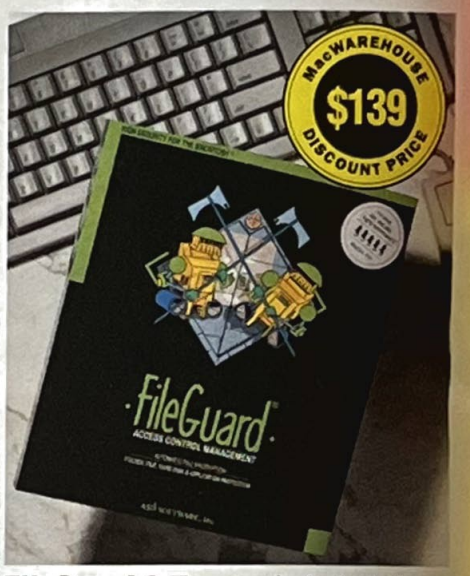


FileGuard 2.7

(ASD Software) "It's sleek,fast, and safe. I highly recommend it.": MacUser April, 1991. Protect your Hard Drives and Partitions from unauthorized access (including security bypass with a system diskette), copying and erasure; Applications and File/Folders (including system folder) from unauthorized access, deletion, and/or illegal copying; Desktop (including system folder) from alterations by unauthorized user; Keep an eye on System Usage with the system users log which continuously tracks user/group activity. System 7.0 compatible. **UTI0135** ***FaxFACTS 6806***

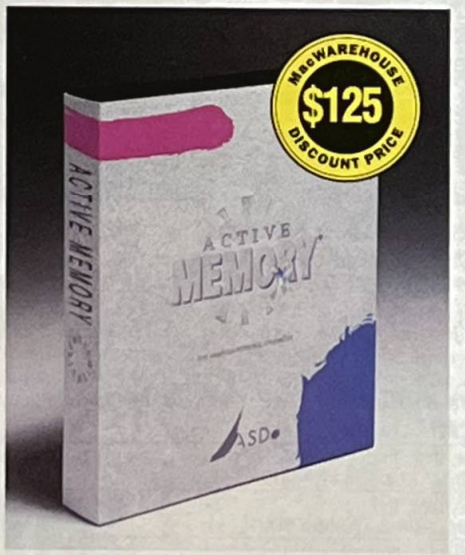
MacUser Rating 4/91

Empower I 4.0.7 & Empower II 4.0.7

(Magna) **Empower I** provides password security for your Mac. Only registered users with the correct password can gain access to the data stored on floppy and hard disks. A screen saver hides displayed data from prying eyes. It can prohibit startup from floppies, and a log keeps track of all attempts to use your Mac. **UTI0225** ***FaxFACTS 6600*** **Empower II** offers three forms of security. First, it restricts access to authorized users at the system level. Then it restricts access to folders and files with options to view only, or make changes. Finally, it provides optional, automatic, transparent encryption to protect sensitive data. System 7.0 compatible. **UTI0226** ***FaxFACTS 6601***

HayesConnect™ Version 3.0

(Hayes) Turn your modems, printers, plotters, and other serial devices into shared resources on your AppleTalk network. HayesConnect is the software solution that expands the usefulness of your peripherals by enabling you to share a wide variety of serial devices connected to Macintosh® computers on any AppleTalk® network. Sharing resources on your network gives you greater versatility, convenience, and cost control. For example, HayesConnect allows you to share the use of high-speed modems among many network users. No need to buy modems and phone lines for everyone; simply use HayesConnect to pool a few modems for the use of everyone in your group. **COM0095** ***FaxFACTS 1770***



Active Memory 2.0

(ASD Software) Active Memory™ is a personal organizer that makes it easier to manage your data in the office or on the road. It enables collaboration with co-workers over a network-even through remote access. Active Memory turns your PowerBook into a power organizer. Use it to record brainstorms, manage sales leads, enter field results or record travel expenses while they are still fresh in your mind. Once back at headquarters, transmit reminders to yourself and networked co-workers. Automatically carry over unfinished tasks to the following day. Or use Active Memory to print your personal telephone book or travel itinerary for your day timer. Unlike static contact management or calendar programs, Active Memory is as dynamic as you are. **BUS0207** ***FaxFACTS 1515***

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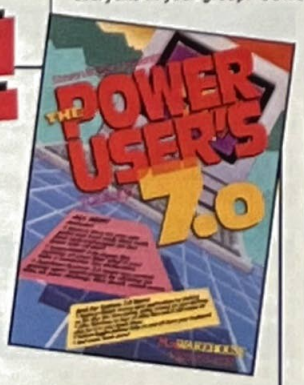

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- Incredibly reliable less than .0006% returned on the 45mb!
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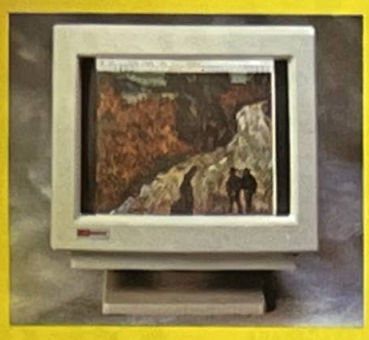

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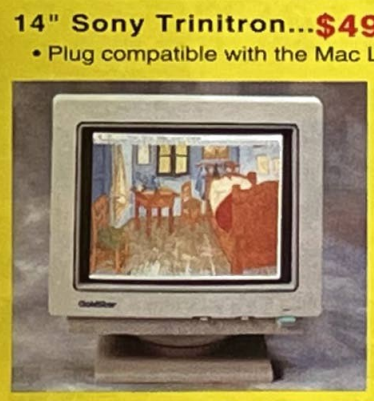

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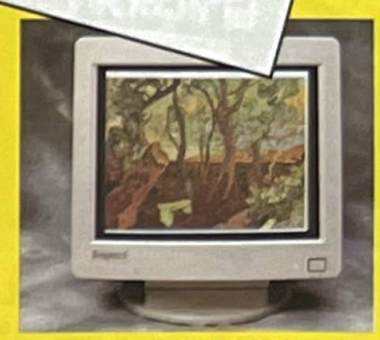

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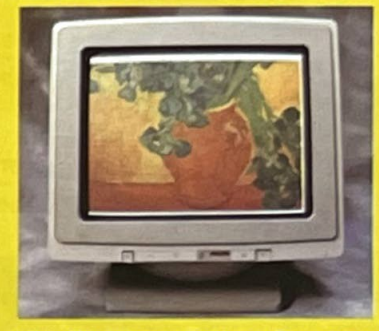

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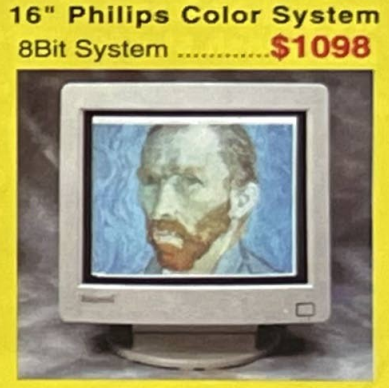

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4.1.2 PROMS

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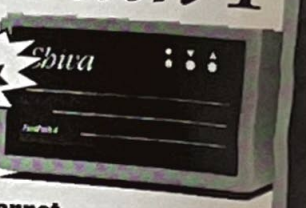

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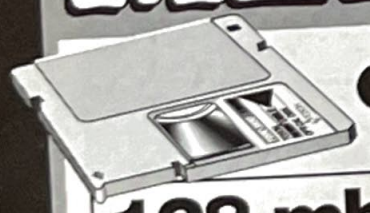

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Maya Computer

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Bernoulli 20 meg 5.25" - 3 pack - Gold Pack	196
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Disks

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Sony, HD 1.4m, bulk (50)	58
Sony, DS 800k, boxed (10), branded	9
Sony, HD 1.4m, boxed (10), branded	17
Platinum, DS 800k, bulk (50),	22
Platinum, DS 800k, bulk (50), formatted	28
Platinum, HD 1.4m, bulk (50),	45
Platinum, HD 1.4m, bulk (50), formatted	59

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Sony	
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- New Grolier Electronic Encyclopedia
- The Software Toolworks World Atlas
- Time - Desert Storm

7 CD titles, 2 speakers & headphones with CDR-73 $779

7 CD titles, 2 speakers & headphones with CDR-36 $539

11 CD's for $200

CD Super Bundle!

Buy any CD-ROM Drive in this ad and get these 11 CDs for $200!

Wayzata	List $
CD Fun House	65
Washington Times & Insight on the News	149
Gaia/Environmental Resources	249
EPS Professional	299
PhotoBank	185
List price Total	**1391**
You Pay	**$200**
You Save	**1191**

CMC	List $
Shakespeare	49
Audubon Birds of America	99
Sherlock Holmes	49
Mammals	99
Family Doctor	99
ICP - Macintosh Software Reference Database	49

Maya Computer

CD-ROM Drives

Chinon CDC-431 with remote control	599
CD Technologies CD-Porta Drive 325ms	599
Toshiba XM3301A 325ms	649
NEC Intersect CDR-73	655
NEC Intersect CDR-36	449

CHINON CDA-431 350ms $569

Call Mon - Fri 9-8 / Sat 10-4
Maya Computer, Waitsfield, VT
802-496-8110 FAX
800-541-2318

BBS Orders 802-496-9330 "Veil of Illusion"

Maya Computer

Monitors

radius

Color Pivot Display $1289
• Compatible with Mac IIsi & IIci built-in-video (16 colors)

Color Pivot Display Systems $1809
• SE/30, LC, IIsi, or NuBus

Pivot Display $699
• Compatible with Mac IIsi & IIci built-in-video

Pivot Display Systems $929
• SE/30, LC, or NuBus

Full Page Display $589
• Compatible with Mac IIsi & IIci built-in-video

Full Page Display Systems
• SE or Classic (monochrome) $779
• SE/30, LC, NuBus (gray scale) $849

Precision Color Display/19 $2119
• 19" multi-frequency display

Precision Color Display/20 $2789
• 20" multi-frequency display

Precision Color Display/20 Systems
• with PrecisionColor 8, 8si Interface $3309
• with PrecisionColor 8X ,8Xsi Interface $3549
• with PrecisionColor 24X, 24Xsi Interface $3889

Color Display /21 $2899
• 21" 2-Page color display

Color Display/21 Systems
• with PrecisionColor 8, 8si Interface $3419
• with PrecisionColor 8X ,8Xsi Interface $3659
• with PrecisionColor 24X, 24Xsi Interface $4589

Two Page Display/19 Systems
• with PrecisionColor 8 Interface $1429
• with TPD Interface for SE, SE/30, IIsi, NuBus $1299

Two Page Display/21 Systems
• with PrecisionColor 8 Interface $1699
• with TPD Interface for SE, SE/30, IIsi, NuBus $1559

PowerView $519
• drives any 13" color & Color Pivot monitors

RasterOps

Monitors	
21" Color Hitachi	$Call
19" Color Hitachi	$Call
19" Color Trinitron	$Call
Graphic Display Boards	
24si (13" 24-bit Accelerated)	$Call
264/SE30 (13" 24-bit Color for SE/30)	$Call
24XLi (21" 24-bit Accelerated Color)	$Call
8XLi (21" 8-bit Accelerated Color)	$Call
8XL (21" 8-bit Color)	$Call
MultiMedia Products	
24Sx (NEW!) (13" 24-bit Color Video)	$Call
24STV (13" 24-bit Color Video)	$Call
24XLTV (21"-13" 24-bit Accel. Color Video I/O)	$Call

SUPERMAC
THE SUPERSOURCE FOR COLOR

Monitors	
SuperMatch 20" Dual Mode Trinitron	$2519
SuperMatch 20" Color	$1679
SuperMatch 17" Multimode Color *	$1029
21" Platinum Black & White	$999
19" Platinum Black & White	$919
* Due to price increase, offer ends March 1, 1992	
Video Cards	
Spectrum 24 Series III	$1429
ColorCard/24	$499
ColorCard Accelerator	$339
Spectrum 8•24 PDQ / PDQsi	$839
Spectrum 8 (IIsi, LC, NuBus)	$499
Monochrome Adapter	$335
Digital Video Boards	
Video Spigot-NuBus	$499
Video Spigot-IIsi, or LC	$419
Video Spigot Pro	$1349

E-MACHINES
E-Magination at work™

E-Machines E16 Color Monitor	$999
E-Machines T16 Color Monitor	$1599
E-Machines T16 II Color Monitor	$1699
Double Color Graphics Card	$319
Double Color LC Graphics Card	$389
Futura SX Color Card	$839

NEC
(NEC monitors below include MAC cable adapter)

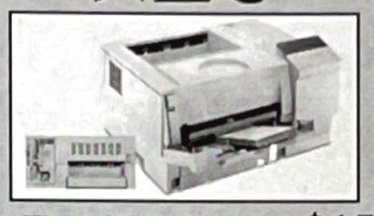
MultiSync 3FGX (15" Color Monitor)	$679
MultiSync 4FG (15" Monitor w/ AccuColor Control System)	$819
MultiSync 5FG (17" Monitor w/ AccuColor Control System)	$1589
MultiSync 6FG (21" Monitor w/ AccuColor Control System)	$3019

Printers

EPSON

EPL-7500 Laser Printer $1995
• TRUE Adobe PostScript
• High-speed RISC processor
• Parallel, serial and AppleTalk interface standard
• HP LaserJet Series II Emulation
• 6 ppm • 35 resident fonts
• 2 MB RAM standard, expandable up to 6MB
• MicroArt Printing with 300 X 300 dpi resolution
• 2 Year Warranty

NEC



SilentWriter Model 95 $1529
•Adobe Postscript Level 2 • Auto Emulation Switching
• 6 ppm • 2mb RAM • Auto interface monitoring
• 300 dpi resolution

SilentWriter2 Model 990 $2849
• 8 ppm • Canon Engine • 32 MHz RISC Processor
• Built in SCSI Port • Auto-Emulation Switching

HP DeskWriter C $739

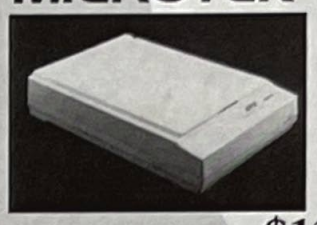
Scanners

EPSON

ES-300C Scanner $1149
• Fixed 300 dpi high resolution scanning with adjustability from 50 to 600 dpi
• MAC/MS-DOS PC compatible
• 24-bit color & 8-bit mono scanning
• Epson's TruePass scanning system (3 sep. light bars for one-pass scanning)

FREE ColorStudio ImageStudio ScanDO/DA

MICROTEK



600ZS Color Scanner $1339
• Up to 600 dpi hi-res scanning
• OCR Compatible
• Built in SCSI Interface

FREE Adobe Photoshop (v.2.0)

MOUSE SYSTEMS NEW !!

PageBrush Color Hand Scanner $529
• 100 - 400 dpi (12-bit Color)
• Maximum Scanning Area: 4.13" X 14"
• Includes Interface and Video Paint by Olduvai

HP ScanJet IIc Scanner $1349

Networking

ASANTÉ

Mac II Series, LC Ethernet Cards	
Thick/Thin, 16K or Thick/10BaseT, 16k	$159
Thick/Thin, 64K or Thick/10BaseT, 64K	$209
Mac II Series, SI Ethernet Cards	
Thick/Thin/10BaseT, 64K	$249
Mac Plus/Classic Ethernet Adapter	
SCSI Ethernet Thick/Thin/10BaseT	$309
Other Mac Models Available! Call!	
10BaseT Hub with 12 Ports	$499
10BaseT Hub with 8 Ports	$249
Friendly Net Adapters	
Quadra & LaserWriter IIg (Thin or 10BaseT)	$79
Quadra & LaserWriter IIg (Thick/Thin/10BaseT)	$125

Memory and Math CoProcessors

1mb - 8 - 80ns SIMMs	$36
2mb - 8 - 80ns SIMMs	$89
4mb - 8 - 80ns SIMMs	$135
1mb Classic Card	$55
1mb FX SIMMs	$37
4mb FX SIMMs	$139
16mb SIMMs for IIfx	$869
16mb SIMMS for IIsi, IIci, Quadra 900	$859
16mb SIMMS for Radius Rocket	$1199
16mb Low Profile SIMMs (SE/30, Quadra 700 & 900)	$1265
256K VRAM for Quadras	$59
Sonnet	
PMMU Motorola 68851RC16 (Mac II) - 16MHz	$125
68882 FPUs	
Motorola 68882RC20A FPU - PGA - 16 MHz	$99
68882 FPU Cards	
MAC LC FPU - 16 MHz	$103
MAC LC FPU- 20 MHz	$125
MAC Classic II FPU- 16 MHz	$103
MAC Classic II FPU - 20 MHz	$125
QLS (Quantum Leap Systems)	
QLS 16 MHz 68881 for LC	$89
QLS 16 MHz 68882 for LC	$129
Applied Engineering	
FastMath Classic II FPU board for Mac Classic II	$158
QuickSilver Static RAM Cache Card-Mac IIsi w/16MHz FPU	$284

Accelerators & Cache Cards

DAYSTAR DIGITAL
30 DAY MONEY BACK GUARANTEE

PowerCache (Mac LC, SE/30, II, IIx, IIcx†, IIsi, IIci)

33 MHz PowerCache	$639
33 MHz PowerCache with 68882 math chip	$839
40 MHz PowerCache	$839
40 MHz PowerCache with 68882 math chip	$1069
50 MHz PowerCache	$1299
50 MHz PowerCache with 68882 math chip	$1579

†Some models of the IIcx do not provide a socket for the 68030, it is soldered into the motherboard. Price includes socket installation on the IIcx motherboard by DayStar and return shipping UPS Blue.

Cache Cards for IIsi & IIci
(IIsi model includes DualPort adapter)

FastCache IIsi	$285
FastCache IIsi with 68882 math chip	$349
FastCache IIci	$255

RAM Expansion Boards for NuBus

RAM PowerCard - 0 MB DRAM	$469
RAM PowerCard - 0 MB for 16MB composites*	$469

*Require 3 NuBus slots, except on the IIcx, IIci, and Quadra 700

SCSI Accelerators for NuBus

SCSI PowerCard - 0 MB DRAM	$1035

radius

Rocket $1675

Radius Rocket 25i	$1255
Accelerator 16 for Mac SE with FPU	$454
Accelerator 16 for Mac SE	$323

MICRON TECHNOLOGY, INC.

Mac II or SE/30 8-bit Video Card	$289
Mac IIci Cache Card 128K	$199
ATTO 32K 030 Cache Card (Mac IIsi)	$209
ATTO 64K Cache Card	$149

Applied Engineering

3.5" AEHD 1.44MB External Floppy Drive	$215
Cache-In 50 50MHz 68030 Accelerator for Mac IIsi	$1769
Quicksilver Static RAM Cache Card for Mac IIsi	$219
Transwarp 040 25MHz 68040 CPU Accelerator for NuBus	$1959

Harris Laboratories

Mac Classic 16MHz Accelerator	$229
68881 Math Co-Processor Upgrade	$75

PSI

Crunch-It! (68882 Math Coprocessor for LC)	$109
MultiColor (8/16-bit Video Memory Upgrade for LC)	$96
Cache-It ! Bundle (030 Expansion, Cache, FPU Board for IIsi)	$295

SAMPO AMERICA

Mac OfficePRO II Graphic System
• 20" high resolution monochrome display
• 1024 X 768 at 72 dpi
• 1-bit Lapis Video Card

$749

Powerbook Products

External Powerbook SCSI cable	$45
2mb Memory Upgrade for Powerbook (140/170)	$225
4mb Memory Upgrade for Powerbook (140/170)	$399
6mb Memory Upgrade for Powerbook (140/170)	$539
Powerbook Internal Modems	$Call
Powerbook Internal Fax Modems	$Call
Radius PowerView for Powerbook	$519
• Drives any 13" color and Color Pivot monitors	

Fax Modems and Modems

Abaton INTERFAX 24/96	$299
DoveFax Desktop (2400 baud modem/9600 baud fax modem)	$275
DoveFax Plus	$335
EMAC 2400 Modem with MNP 5	$145
3C 2400/9600 Baud Fax Modem	$189
3C 2400 Baud Modem (incl. comm. software & cable)	$97

ClubMac

1-800-CLUBMAC

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Info & International (714)768-8130
Technical Support (714)768-1490
24-Hour Fax (714)768-9354

3 Musick • Irvine, CA 92718

1-800-CLUBMAC

1-800-258-2622

All **Quantum** products feature average seek times of 25ms or less plus proprietary performance-enhancing features such as DisCache and WriteCache. With DisCache, a look-ahead caching scheme for read commands, result in effective access times as low as 9ms, and WriteCache, a sophisticated caching scheme for write commands, results in through put improvements up to 250%. Quantum drives have a MTBF of 250,000 hours. **Quantum Drives include a TWO Year Warranty** and ClubMac Package. 3.5" Half Height drives are the PRO series. 3.5" Low Profile drives are the LPS series. *3.5" Low Profile, Low Power drives for the Mac Classic, LC & IIsi. (Internal Drives: Add $10 for Quadra 900 Bracket for Half Height & Low Profile Drives)

Quantum

Capacity	Model Number	Product Description	Internal	External
50mb	LPS50	3.5" Low Profile 9ms/25ms*	$215	$275
105mb	LPS105	3.5" Low Profile 9ms/25ms*	$335	$395
120mb	LPS120	3.5" Low Profile 10ms	$399	$459
240mb	LPS240	3.5" Low Profile 10ms	$659	$719
425mb	PRO425	3.5" Half Height 8ms	$1179	$1239

Seagate

Seagate Drives include a ONE Year Warranty and the ClubMac Package. *Internal Full Height Drives fit the Mac II, IIx, IIfx, and Quadra 900 only. (Add $10 for Quadra 900 Bracket for Half Height Drives. Add $20 for Quadra 900 Bracket for Full Height Drives.)

Capacity	Model Number	Product Description		Internal	External
420mb	ST1480N	3.5" Half Height	14ms	$1269	$1329
320mb	ST2383N	5.25" Half Height Wren-6	14ms	$1155*	$1215
320mb	ST4385N	5.25" Full Height W-Run	10.7ms	$1249*	$1349
645mb	ST4767N	5.25" Full Height W-Run II	11.9ms	$1619*	$1719
645mb	ST4766N	5.25" Full Height Wren-6	15.5ms	$1389*	$1489
1.0GIG	ST41200N	5.25" Full Height Wren-7	15ms	$1869*	$1969
1.4GIG	ST41650N	5.25" Full Height Wren-8	15ms	$2339*	$2439

Tape Backup Systems

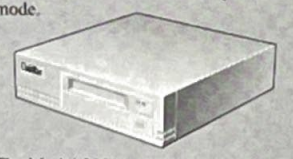
All our tape backup systems include a ONE year warranty, one cassette, RETROSPECT (v.1.3) backup software, and all necessary cables.

Teac MT-2ST/N50	155mb	$579
Teac MT-2ST/F50	600mb	$779
WangDAT 1300XL	2.0GIG	$1295
WangDAT 2000	5.0GIG	$1569
Exabyte 8200	2.2GIG	$2095
Exabyte 8500	5.0GIG	$3329
Hewlett Packard DAT 35470A	2.0GIG	$1439
Hewlett Packard DAT 35480A	5-8GIG	$1879

The **Teac MT-2ST Series** of Tape Backup Systems offers superior reliability, higher transfer rates and greater capacities than any 1/4" data cartridge system now on the market.

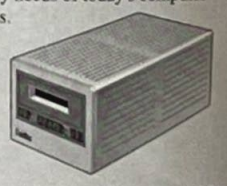
The Teac's easy-to-use MT-2ST Series is a relentlessly reliable, cost-effective solution to your back-up, archival storage, program or data distribution needs. It offers you actual transfer rates 7 and 14 MB/min. A variety of interfaces. A choice of form factor. And non-compressed capacities of 155MB and 600MB.

WangDAT's 5.25" Model 2000 features the *DATAClass* mechanism, 30 sec. ave. access time, data transfer rates reach up to 30MB/min in compression mode.



The Model 2000 is supported by an MTBF of 50,000 hours and WangDAT's long-life 10,000 hour recording heads. In addition, the on-board *Power-Safe* reel braking system ensures gentle tape handling even during system power failures.

The **Exabyte 8200** 8mm tape Backup System combines removable, rewritable magnetic media with a compact, integrated drive/controller to meet the high storage capacity needs of today's computer systems.



Additional features: Integrated SCSI controller within drive package • On board Error Correction Code and Error Recovery Procedures • Integrated speed-matching buffer • High-performance dat a transfer rate

SyQuest

SyQuest 44 mb and 88mb capacity cartridges easily replace fixed disk drives. Syquest drives includes a **2 year warranty**, one cartridge [*Includes (1) 44mb & (1) 88mb cartridge], all the necessary cables, and ***SCSI* Director™** Formatting Utility. Drives Feature:

- 20ms ave. access seek time • Fully embedded SCSI controller
- Transparent defect management with track and sector sparing
- Automatic Error Correction and retry • MTBF of 60,000 hours

44mb SQ555	$429
88mb SQ5110	$589
Dual 44mb	$779
Dual 88mb	$1099
Dual 44mb & 88mb*	$989
44mb Cartridge	$65
88mb Cartridge	$109

ClubMac Package

***SCSI* Director™** Hard Disk Formatting Utility
- All ClubMac Drives are System 7.0 compatible!
- A/UX supported
- Partition & Password Protection

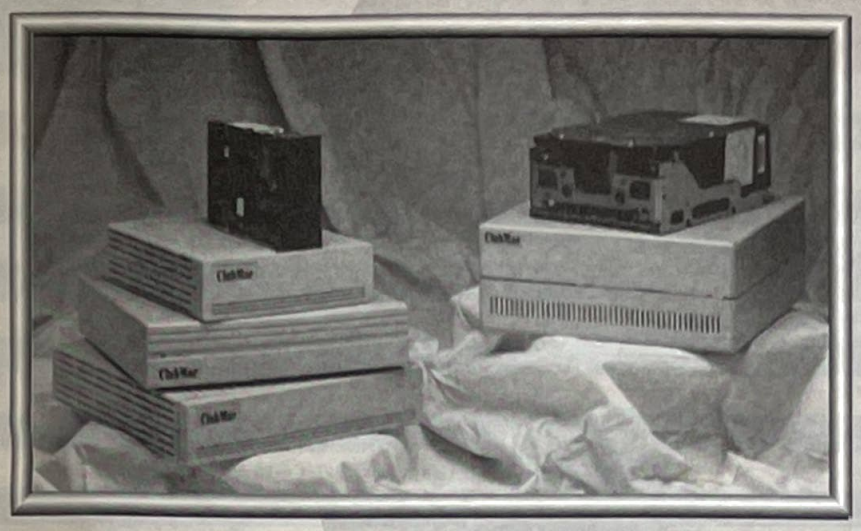
- **ClubMac Package:**
  Internal Drives include mounting brackets, cables, and ***SCSI* Director™** Formatting Utility
  External Drives include a 25/50 pin SCSI cable, power cable, ***SCSI* Director™** Formatting Utility, and a zero-footprint cabinet (two 50 pin SCSI ports, removable termination, and auto-switching power supply)
- All hard drives come pre-formatted and tested.
- All drives have internal termination.
- Termination can be removed upon request.
- Daisy chain cable substituted upon request.
- All capacities and speeds are manufacturer's specs. Actual specs may vary.

ClubMac Package

1-800-CLUBMAC

HEWLETT PACKARD

The HP disk drives featured combine world-class performance with unmatched reliability. These drives ship with what Hewlett Packard believes is the first **SCSI-2 embedded controller**. HP disk drives have 150,000 hours MTBF. Hewlett Packard backs up the quality and reliability of their disk drives with a **5 year warranty†**, insuring low overall cost of ownership and long-lasting value. The HP disk drives include the ClubMac Package. **The HP DAT drives** include a ONE Year Warranty, one 90m cartridge, and RETROSPECT (v.1.3) backup software. HP's own Data compression chip set allows increased capacity and improved compatibility with DDS standards.



Capacity	Product Description	Internal	External
	Disk Drives		
422mb C2235S	• Average seek time: 12.6ms • Average latency: 7.5ms • Data transfer rate: 23 Mbits/sec • Sustained transfer rate: 10 Mbytes/sec	**$1305**	**$1365**
663mb 97548 T/P	• Average seek time: 16.5ms • Average latency: 7.5ms • Data transfer rate: 20 Mbits/sec • Sustained transfer rate: 5 Mbytes/sec	**$1429**	**$1529**
1.0GIG 97558 T/P	• Average seek time: 13.5 ms • Average latency: 7.5ms • Data transfer rate: 23 Mbits/sec • Sustained transfer rate: 10 Mbytes/sec	**$2109**	**$2209**
	DAT Drives		
2.0GIG DDS 35470A			**$1369**
5-8GIG DDS 35480A	features data compression		**$1789**

FUJITSU

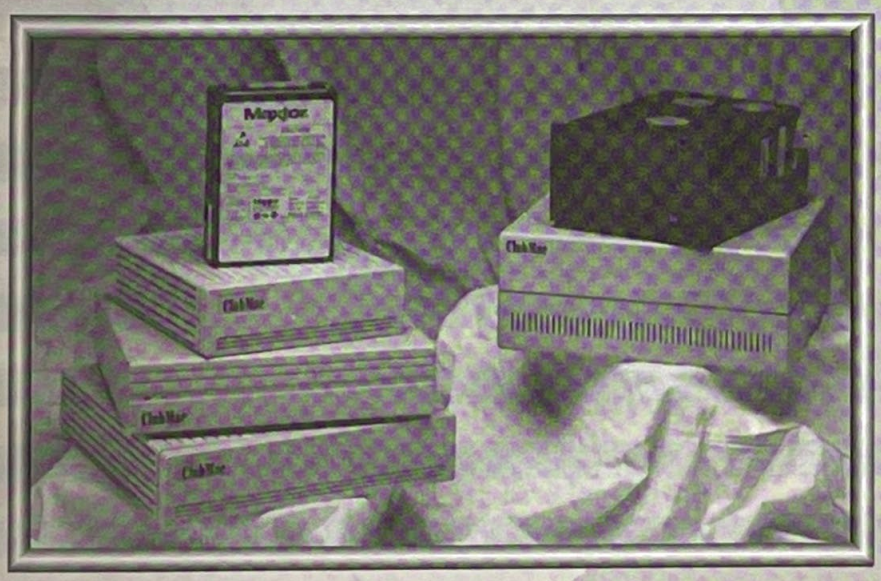
Unbeatable Quality and Performance

Fujitsu 3.5" high performance SCSI disk drives features
- 5MB/s and 10MB/s data transfer rate • 6.82 ms average latency
- 240 KB read-ahead cache buffer • 4,400 RPM spindel rotation

Fujitsu 5.25" high performance SCSI 5.25" Winchesters disk drives features
- Embedded SCSI interface • As fast at 14.5 ms positioning time
- Up to 4.8 MB/sec SCSI data transfer rate

Fujitsu drives include a **5 Year Warranty** † and the ClubMac Package.

Capacity	Model Number	Product Description	Internal	External
330mb	M2622SA	3.5" Half Height 9ms	**$1119**	**$1179**
425mb	M2623SA	3.5" Half Height 9ms	**$1189**	**$1249**
520mb	M2624SA	3.5" Half Height 9ms	**$1249**	**$1309**
345mb	M2261	5.25" Full Height 16ms	**$1189**	**$1289**
645mb	M2263	5.25" Full Height 16ms	**$1259**	**$1359**
1.2GIG	M2266	5.25" Full Height 11.5ms	**$1899**	**$1999**



Maxtor®

Maxtor 3.5" Drives include a ONE Year Warranty and Maxtor 5.25" Drives include a TWO Year Warranty. Maxtor Drives include the ClubMac Package. Maxtor 80 and 120 are perfect for the Mac Classic, LC, and IIsi. *Internal Full Height Drives fit the Mac II, IIx & Quadra 900 only. (Add $10 for Quadra 900 Bracket for Half Height & Low Profile Drives. Add $20 for Quadra 900 Bracket for Full Height Drives.)

Capacity	Model Number	Product Description	Internal	External
80mb	7080	3.5" Low Profile 17ms	**$289**	**$349**
120mb	7120	3.5" Low Profile 15ms	**$349**	**$409**
207mb	LXT-213	3.5" Half Height 15ms	**$595**	**$655**
330mb	LXT-340	3.5" Half Height 15ms	**$949**	**$1009**
535mb	LXT-535	3.5" Half Height 12ms	**$1365**	**$1425**
645mb	XT-8760S	5.25" Full Height 16.5ms	**$1389***	**$1489**
1.0GIG	PO-12S	5.25" Full Height 13ms	**$1829***	**$1929**
1.4GIG	P1-17S	5.25" Full Height 13ms	**$2429***	**$2529**

General Information . . .
- Visa and Mastercard accepted. No surcharge. Credit card orders are billed at time of shipment.
- Prices good for stock on hand. All prices subject to change without notice. Not responsible for typographical errors.
- University POs accepted with NET 30 terms. Corporate POs accepted upon APPROVAL.
- All shipments are FOB origin. Prices do not include freight. COD orders accepted, limit $1500.

• Warranties . . .
- All items manufactured by ClubMac are returned to ClubMac for warranty repair.
- All items carry manufacturer's warranty. † Restrictions apply.

Money Back Guarantee . . .
- Only items manufactured by ClubMac carry a 30 day money back guarantee.
- ClubMac provides 30 day money back guarantee on all other products if manufacturer offers guarantee.
- Laser Printers, Scanners, Software, Monitors, Graphic Solutions and special order items do not carry a money back guarantee.
- All implied guarantees do not apply to price reductions. Some limitations apply.

Returns . . .
- Any product that is returned WITHOUT a RMA number will be refused and sent back to customer at customer's expense. Call for RMA number. Proof of purchase is REQUIRED.

VISA MasterCard

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TECHWORKS™

UNCONDITIONAL LIFETIME WARRANTY

THIRTY-DAY MONEY-BACK GUARANTEE

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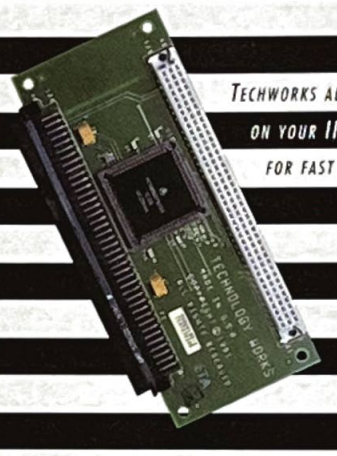
WITH TECHWORKS MEMORY KITS YOU CAN RUN MEMORY-INTENSIVE NEW PROGRAMS MUCH FASTER. ALL OUR MODULES UTILIZE HIGHLY RELIABLE SURFACE MOUNT TECHNOLOGY AND CMOS MEMORY CHIPS.

GET MORE COLOR POWER FOR YOUR LC WITH TECHWORKS 512K VRAM CARD.



TECHWORKS ADAPTER CARD RUNS ALL SE-30 PRODUCTS ON YOUR IISI. ALSO AVAILABLE WITH FPU FOR FAST MATH.

POWER UP TO MAXIMUM RAM

MEMORY KITS	SIMM SIZES AVAILABLE						
	1MB	2MB	3MB	4MB	6MB	8MB	16MB
MACINTOSH PLUS	•						
MACINTOSH SE	•						
MACINTOSH SE/30	•			•			
MACINTOSH II	•			•			
MACINTOSH IIX	•			•			
MACINTOSH IICX	•			•			
MACINTOSH IICI	•	•		•		•	•
MAC CLASSIC	•		•				
MAC CLASSIC II	•	•		•			
MACINTOSH LC	•	•		•			
MACINTOSH IISI	•	•		•		•	
MACINTOSH IIFX	•			•		•	•
LASERWRITER IINTX	•						
TI MICROLASER	•						
HP LASERJET	•	•		•			
PORTABLE			•				
QUADRA 700	•			•			
QUADRA 900	•			•		•	•
POWERBOOK 100		•		•	•		
POWERBOOK 140		•		•	•		
POWERBOOK 170		•		•	•		

CARDS	
MACINTOSH LC	512K VRAM - LC FPU
MACINTOSH IISI	ADAPTER CARD - ADAPTER CARD WITH FPU
QUADRA 700/900	256K VRAM
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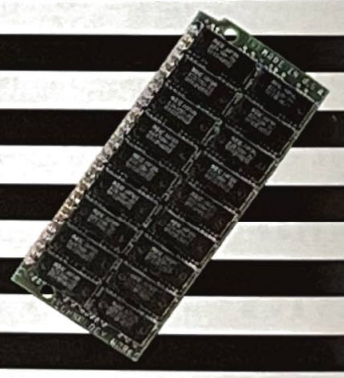

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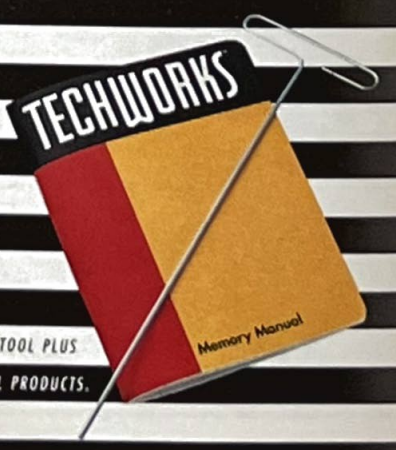

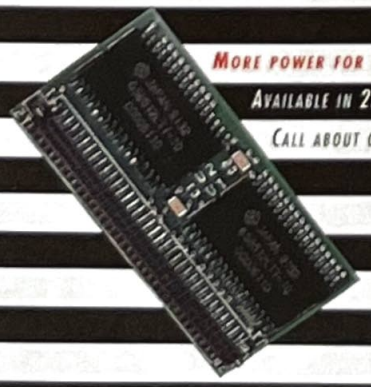

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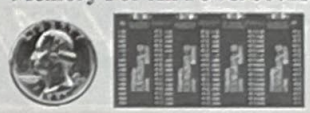

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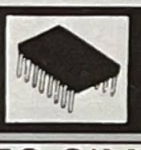

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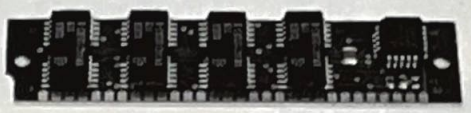

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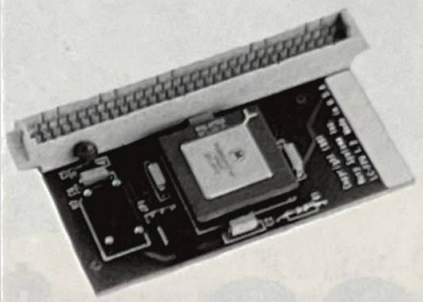

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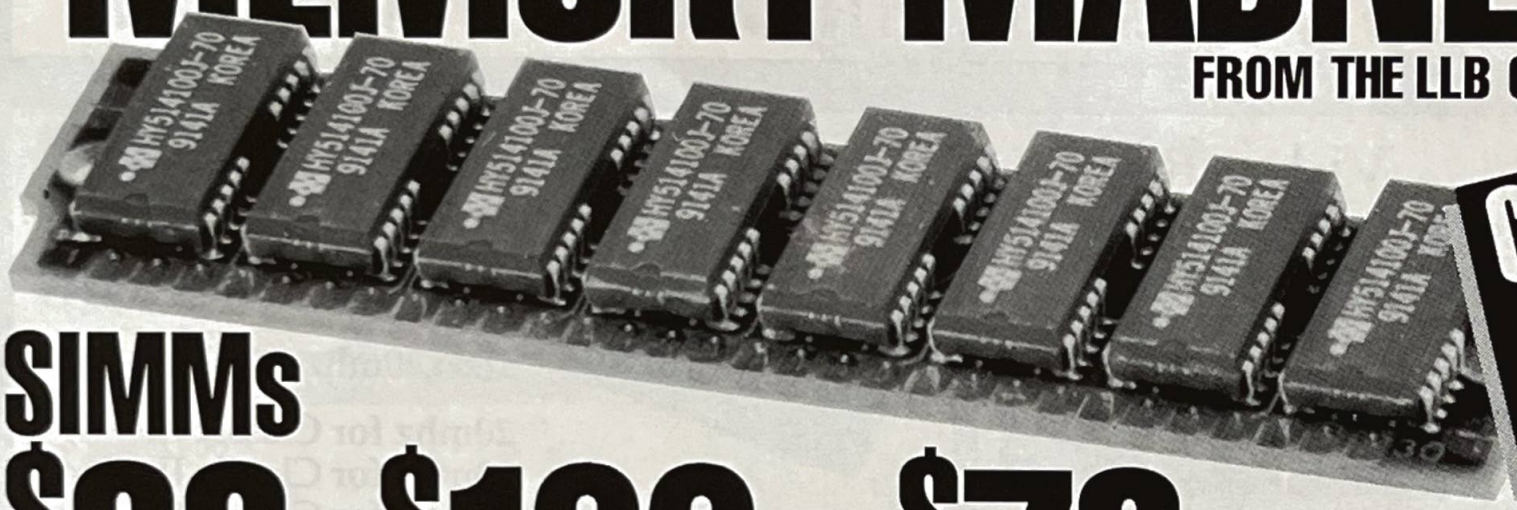

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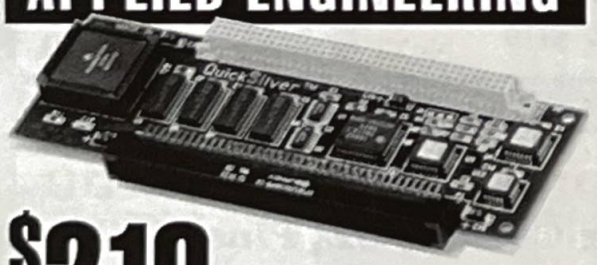

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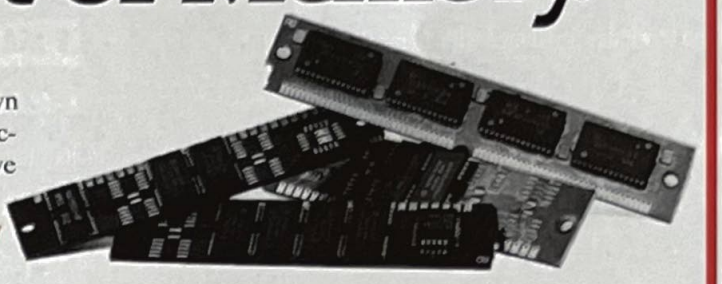

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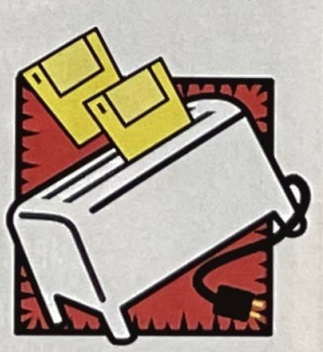

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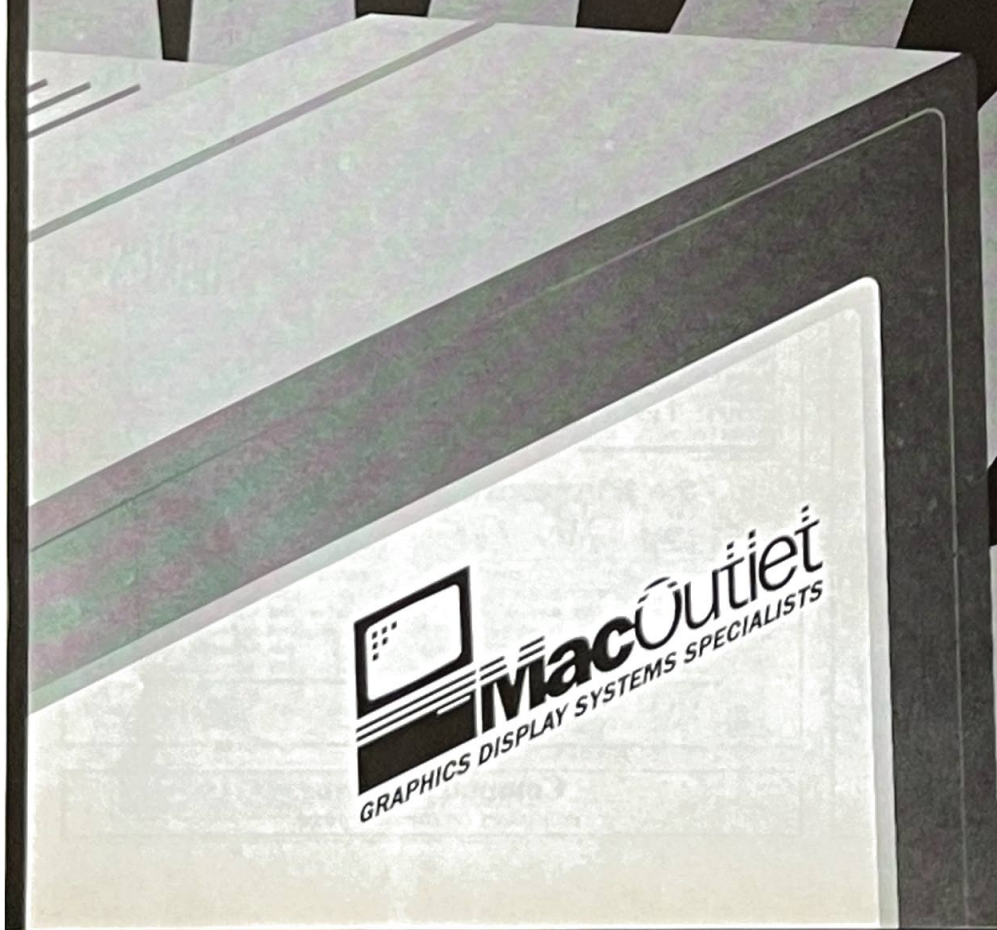

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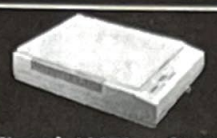
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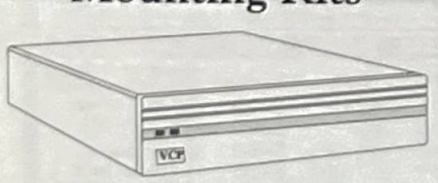

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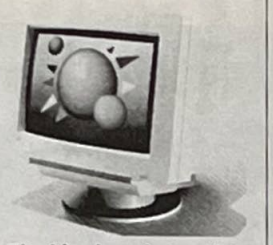

Includes: monitor, 8-Bit video board, & cable!

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Includes 19" Ikegami C/N 20 monitor, Relax 8-Bit video board, & cable!

19" Pkg. - 256 Colors 1,499

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1 Meg. - 1Mx8-100/Mac** 36

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1 Meg. - 1Mx8-80/Mac** 39

2 Meg. - 2Mx8-80/Mac*** 79

4 Meg. - 4Mx8-80/Mac*** 129

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16 Meg. - 16Mx8-80/IIfx High Profile 849

Quadra - 256K Video SIMM*** 59

Classic - 3 Meg. Expansion Card w/1 Meg. .. 59

Powerbook - 2 Meg. Expansion Card 229

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Powerbook - 6 Meg. Expansion Card 589

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* minimum = 8 ** minimum = 4 *** minimum = 2

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6-Disc CD-ROM Changer - Pioneer 999

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Educorp Public Domain CD (Mac) 29

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Includes media, software & cables - additional media next page.

128 Meg. Ricoh ISO 3010E New! 1,399

128 Meg. Optical Cartridge New! 49

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Software Bundle 149

Color Studio LE, and Scan-Do Software.

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CD-ROM - Vista - Toshiba Player 579

CD-ROM Disc Caddy 8

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2/5 Gig. ExaByte Compatible 8 mm	18	13
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600 Meg. 5-1/4" Optical Plastic Single	139	119
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600 Meg. Optical - Plastic, Pioneer	189	169
600 Meg. WORM, Pioneer	119	99

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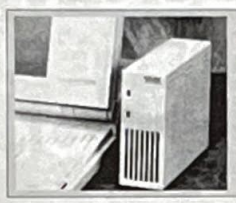

105 Meg. Sierra

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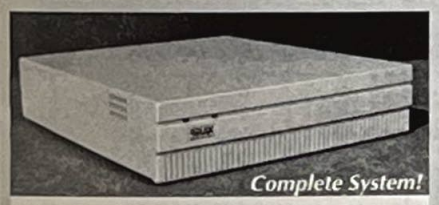
60 Meg. Pocket - Maxtor, 17 ms.	279
80 Meg. Pocket - Maxtor, 17 ms.	329
105 Meg. Pocket - Quantum, 28 ms.	379
120 Meg. Pocket - Maxtor, 17 ms.	489
40 Meg. Sierra - Maxtor, 17 ms.	249
52 Meg. Sierra - Quantum, 28 ms.	269
105 Meg. Sierra - Quantum, 28 ms.	389
240 Meg. Sierra - Quantum, 16 ms.	739

Hard Disk Drives - Internal & External



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Vista - Maxtor 7060S 17 ms. While quantities last!

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80 Meg. - ST1096N, 20 ms	249	309
170 Meg. - ST1201N, 15 ms	539	599
240 Meg. - ST3283N 12 ms	599	659
330 Meg. - ST1401N, 12 ms.	1,209	1,269
425 Meg. - ST1481N, 14 ms.	1,309	1,369
525 Meg. - ST1581N, 14 ms.	1,509	1,569
1 Gig. - ST11200N, 12 ms.	2,609	2,669
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300 Meg. - ST4350N, 16.5 ms.	1,099	1,159
600 Meg. - ST4702N, 16.5 ms.	1,439	1,499
660 Meg. - ST4766N, 15.5 ms.	1,569	1,629
1.0 Gig. - ST41200N, 15 ms.	1,939	1,999
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330 Meg. - RUNNER, 10.7 ms.	1,299	1,359
660 Meg. - RUNNER, 11.9 ms.	1,749	1,799

Quantum 3-1/2" LPS	Internal	Vista External
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105 Meg. - LPS 105, 11 ms.	349	409
240 Meg. - LPS 240, 16 ms.	699	759
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105 Meg. - LPS 105LP, 28 ms.	339	399
3-1/2" Pro Series		
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Fujitsu *3-1/2" Half Height*		
520 Meg. - 2624SA, 12 ms.	1,499	1,559
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350 Meg. - 2261SA, 15 ms.	1,299	1,359
650 Meg. - 2263SA, 15 ms.	1,439	1,499
960 Meg. - 2266SA, 15 ms	2,139	2,299
Maxtor *3-1/2" Low Profile/Low Power*		
60 Meg. - 7060S, 17 ms.	239	299
80 Meg. - 7080S, 17 ms.	289	349
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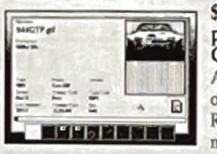

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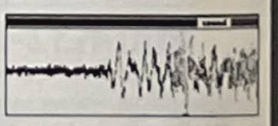

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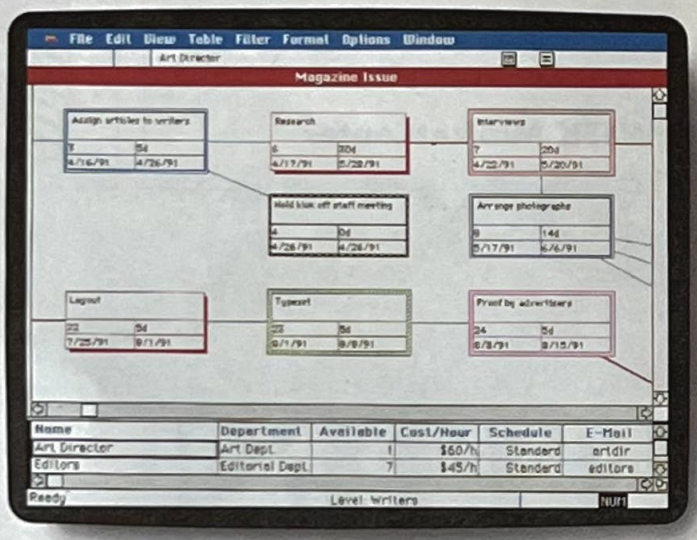

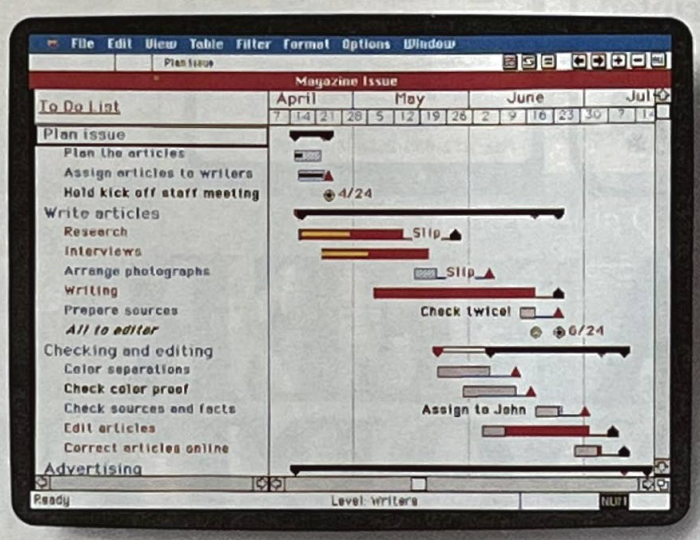

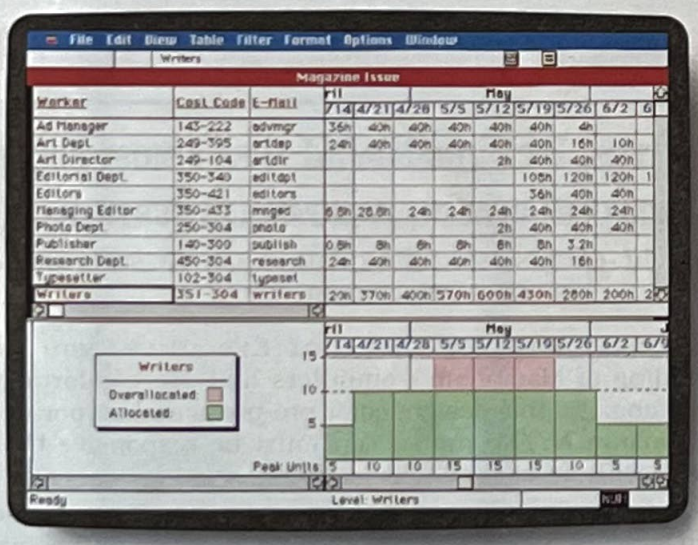

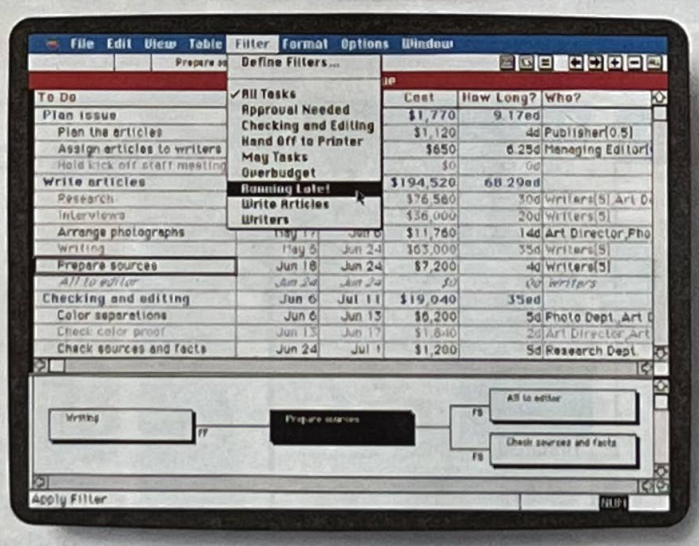

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BUSINESS WATCH

- Industry news
- Market trends

MacWEEK index
MAC STREET PRICES

Despite the largest price cuts in Apple's history, dealers are offering more-modest cuts to maintain their margins.

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Mac IIci 5/SD	$3,299	$2,549
Mac IIci 5/80	$3,999	$3,049
Mac IIsi 5/80	$2,999	$2,299
Mac LC 4/40	$1,699	$1,399
Mac Classic 4/40	$1,499	$ 999
Mac Classic II 4/40	$1,699	$1,299
PowerBook 100 2/20 (w/o external floppy)	$1,999	$1,499
PowerBook 100 2/20 (with floppy)	$2,199	$1,599
PowerBook 100 4/40 (w/o external floppy)	$2,399	$1,799

Source: The PC Street Price Index

Eastern Europe opens to Apple

By April Streeter

Budapest, Hungary — Add Hungarian, Polish, Slovak, Czech and Russian to the list of languages the Mac knows.

With the introduction of a localized version of System 7.0.1 here last week, Apple Europe completed a rollout tour that included three Eastern European capitals as well as Moscow.

Along with unveiling localized systems, fonts, keyboards and manuals, Apple formally reached agreements with distributorships in Hungary, Poland, Czechoslovakia and the Commonwealth of Independent States (CIS), the new entity that has replaced the Soviet Union.

In hopes of tapping the potential of these emerging economies, Apple opted to partner with independent companies who might have a feel for local customer needs, rather than set up its own subsidiaries.

Of the four, Poland traditionally has been most receptive to the Macintosh, according to Rick Lada, Apple business development manager for Poland.

The local distribution company there, called SAD (Polish for "orchard") Ltd., is staffed by a group of Mac evangelists that have seeded the market since 1985, according to Lada. As in other countries, sales for desktop publishing applications have led the way, with two prominent national publications — the daily Rzeczpospolita and the weekly newsmagazine Spotkania — recently making large purchases.

The selection of localized software is still sparse, and funds for computer equipment remain scarce in the hard-pressed economies of the region.

But other barriers that previously limited the spread of personal computers in the area have come down with the Iron Curtain: Western restrictions on high-tech trade have been eased, and while customers in the CIS still must pay in rare dollars, Eastern Europe Mac buyers now can pay in local currencies. □

America Online to offer 2 million shares to public

By Shawn Tomlinson

Vienna, Va. — America Online Inc., a national on-line service for Mac and other computer users, plans to go public. The 6-year-old company filed an initial public offering with the Securities and Exchange Commission last week.

AOL, based here, intends to offer 2 million shares of common stock to the public. Half will come from the company, with the other half coming from stockholders. The company expects the IPO to be approved by late March.

"In the past six months, we turned the corner. We reached critical mass," said Steve Case, president of America Online. "More people started working with AOL, and it became the hot Mac on-line product. We're the electronic-mail system for the Mac."

America Online also has helped itself by providing free on-line time to users who sign up others to the service.

"I find AOL extremely useful for sending files conveniently and inexpensively to business associates and friends around the country," said Lisa Sommer, public information specialist for the Albany-Schoharie-

See AOL, next page

E-Machines secures $4 million in new funding for 16" products

By Andrew Gore

Beaverton, Ore. — Despite the recession and reluctance among investors to put their money in relatively low-growth Mac companies, E-Machines Inc. last week announced it had secured more than $4 million in new funding.

E-Machines' latest funding comes just several weeks after a handful of key vendors, including Apple and RasterOps Corp., unveiled 16-inch Mac monitors (see MacWEEK, Jan. 6). About 90 percent of the Beaverton, Ore., manufacturer's projected 1992 revenues are expected to come from sales of 16-inch products.

Before the debut of Apple's Macintosh 16" Color Display, analysts estimated that E-Machines controlled about 85 percent of the 16-inch

See Funds, next page

16 inches to success

- Revenue in '92 of $30 million
- 90% of sales from 16" display products
- Ships 2,000 16" monitor products a month
- 19 consecutive profitable months
- Revenues grew 118% from fiscal '91 to '92

Ann Arbor suit against Ashton-Tate dismissed

By Jeff Ubois

Philadelphia — A multimillion-dollar lawsuit brought by investors in Ann Arbor Softworks against Ashton-Tate Corp. was dismissed in federal court here last week, one day before the case was scheduled to go to trial. The decision could be appealed.

The suit alleged that Ashton-Tate, acquired by Borland International Inc. last year, failed to properly market Ann Arbor's FullWrite Professional word processing package.

Some analysts originally feared the suit might lead to similar suits by disgruntled software developers against publishers. "If Borland hadn't fought it strongly, it could have opened the door to a host of copycat suits," said a source close to Ashton-Tate.

"We felt this case was baseless from the start, and winning it will deter similar types of litigation," said Bob Kohn, Borland vice president and general counsel. "Ashton-Tate fulfilled everything in the contract."

However, Ann Arbor's investors may still appeal the decision. "I was very disappointed by the judge's opinion, and we are still considering our options," said Stuart Savett, a Philadelphia-based lawyer for the plaintiffs.

Savett added, "We believe there was no real marketing and sales efforts" on the part of Ashton-Tate.

Kohn claimed that Ashton-Tate invested more than $20 million in FullWrite Pro and was disappointed with its performance. "It was well-known in the industry that the product was too big, too slow and too late,

See Ashton-Tate, next page

StockWatch

	02.12.92 CLOSE	WEEKLY % CHANGE
Apple	65.25	-1.32
SOFTWARE DEVELOPERS		
Adobe	61.13	-4.86
Aldus	34.00	1.49
Caere	15.50	8.77
CE Software	9.50	10.14
Microsoft	125.75	-1.18
Symantec	47.00	-2.08
PERIPHERALS VENDORS		
CMS	2.63	-16.00
HP	64.13	3.01
Mass Micro	1.38	12.80
QMS	15.38	4.24
Radius	10.50	-2.33
RasterOps	16.00	0.00
Sigma	7.25	3.57
STORAGE		
Conner	20.63	8.55
Maxtor	8.88	0.70
Quantum	16.75	3.08
Seagate	14.50	3.57
INDUSTRY INDICATORS		
DEC	59.13	8.74
IBM	92.00	0.82
Motorola	81.38	3.33
Sun	33.00	-1.49
Dow Jones	3276.83	0.59

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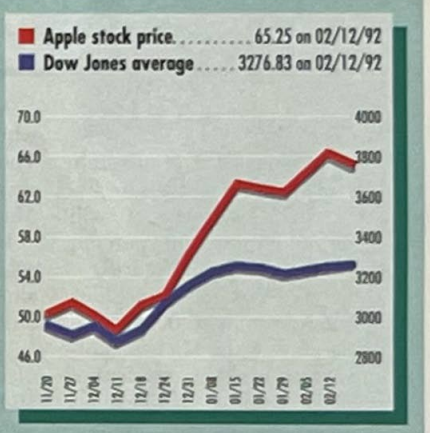
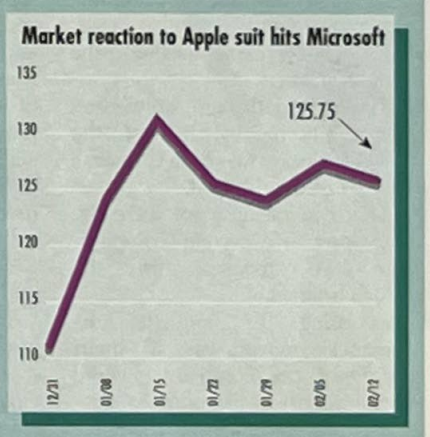
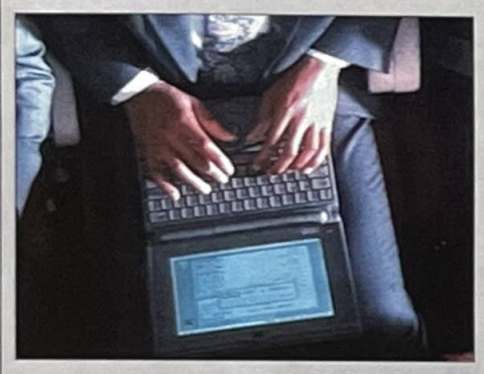




An expert witness's assertion that Apple is owed $4.4 billion in damages from Microsoft Corp. in the landmark copyright-infringement lawsuit sent shock waves through an otherwise listless stock market. Apple's claim chipped away at Microsoft's stock and hurt Apple's as well. For the week, Microsoft finished down $1.50 to close at $125.75 a share, while Apple fell 88 cents to $65.25.

KAREEM SCORES WITH POWERBOOK PLAY



Kareem Abdul-Jabbar lent his considerable stature, not to mention his marketable name, to a national television advertising campaign for the PowerBooks that debuted during the Winter Olympics. The basketball legend may have had trouble squeezing his 7-foot-2-inch frame into an airplane seat, but Apple's portable machine gave him plenty of room. The campaign, called "PowerBook. It's the next thing," will run through the spring. The images were grabbed from a video of the Apple ad.

AOL

From previous page

Schenectady counties' Board of Cooperative Educational Services in Albany, N.Y.

Case said America Online soon will introduce a connection to the Internet, which means users will be able to send E-mail through AppleLink and CompuServe, among other services.

America Online, which originally was named Quantum Computer Services Inc., offered its first on-line service, Q-Link, to Commodore users in 1985.

It moved to PC-Link, based on Tandy's DeskMate software in 1988, before launching America Online for the Mac and Apple II in October 1989.

AOL, which has about 160,000 subscribers, generated some $25 million in revenues last year. □

Funds

From previous page

Mac display market. The privately held company said revenues for fiscal 1992, which ends May 30, will top $30 million, a 118 percent increase over fiscal 1991 figures.

E-Machines' current 16-inch display run rate is about 2,000 units a month, according to Michael Loftus, the company's vice president of sales and marketing. E-Machines posted 19 consecutive profitable months, he added.

But success came hard for the monitor maker.

"Twenty months ago, we weren't making any money. In fact, the [past] four years we [didn't] make a profit," Loftus admitted.

"That was because we were the 'everything to everyone' company. Then we focused on the 16-inch [market]."

According to analysts, E-Machines' move was a smart one. Once the company lowered pricing as part of its volume strategy, more screen real estate made 16-inch monitors a good choice for business users.

But now that companies such as Apple and Sunnyvale, Calif.-based SuperMac Technology have decided to get serious about 16-inch displays, E-Machines' unchallenged reign may be over.

And that, according to Loftus, is why new funding was so important. The investment is earmarked to fuel new development and help keep E-Machines ahead of its competitors.

However, when competing against Apple, market-share loss is almost inevitable, according to industry observers.

"Now that Apple and other manufacturers have entered the market, 16-inch will clearly become the standard," predicted Pieter Hartsook, editor of The Hartsook Letter and Market Research Report in Alameda, Calif. "That means sales of 16-inch monitors will grow enormously. It also means E-Machines will lose market share.

"However, I think E-Machines' revenues and unit shipments will increase, because the market will grow so significantly," Hartsook said.

Hartsook noted that E-Machines' three 16-inch offerings — the low-cost Toshiba-based ColorPage E16, the single-frequency Sony Trinitron-based T16 and the multifrequency T16 II — straddle Apple's single-frequency, Trinitron-based display.

This would allow E-Machines to pick up sales from users either trying to save money or looking for a full-page display option, he added. □

Ashton-Tate

From previous page

and that was the main cause of its demise," he said. "Only 14 percent of the Macs at the time had more than 1 Mbyte of RAM, and this product required 2 Mbytes."

A former Ann Arbor executive, however, said that Ashton-Tate spent a year evaluating FullWrite Pro, including the source code, prior to the acquisition. Borland, Lotus Development Corp., Claris Corp. and Microsoft Corp. reportedly were considering acquiring FullWrite Pro.

"Unfortunately, Ashton-Tate didn't follow through on its promises after the acquisition," said the source, who requested anonymity. "They were more interested in bringing the technology to the PC, and the company didn't have much of a grasp on the Mac market. Just look at dBASE Mac."

Kohn noted that one plaintiff argued, "Ashton-Tate's real intent was to preserve its market in IBM [PC and compatible] computer software by sabotaging better software for the Mac."

Borland still sells and supports the package but has not announced plans to develop it further. □

Is Mac software in Borland's future?

Borland International Inc. isn't saying what it has in store for FullWrite Professional or its other Mac products, FullImpact and Reflex. In fact, the Scotts Valley, Calif., company, which usually follows the lead of its outspoken founder, Philippe Kahn, has been conspicuously mum about its future Mac plans.

"All we have said about FullWrite and FullImpact is that both continue to be sold and supported. We have not announced any plans for further development," said Borland spokesman Steve Grady. "It's not necessarily a situation where we won't be developing products for the Mac."

Borland is involved in developing cross-platform standards with Apple. It joined Apple, Lotus Development Corp. and Novell Inc. to develop a new application programming interface called Vendor-Independent Messaging (VIM) (see MacWEEK, Feb. 10).

Borland refused to comment on speculation that it may sell one or more of its Mac packages to another vendor. Grady admitted that Borland is "focusing on getting Windows versions of Quattro Pro and Paradox out the door."

FullWrite Professional was developed by Ann Arbor Softworks, which was founded by a group of University of Michigan students in the mid-1980s. The company later designed FullPaint, before securing venture capital. — *By Jeff Ubois*

Business BRIEFS

3Com acquires BICC's data networking division

Santa Clara, Calif. — 3Com Corp., in a move to fill gaps in its hub and bridger-router product lines, recently acquired United Kingdom-based BICC Group plc's data networking division.

3Com, based here, will pay $25 million in cash and issue a warrant for 500,000 shares of its stock. The company also will make a one-time $10 million charge against its third-quarter income to cover the deal, a company spokeswoman said.

Under the deal, BICC's data networking business will become 3Com's Premises Distribution Division, headed by former BICC President Janice Roberts. The new division will be responsible for designing midrange hubs and internetworking products.

BICC, which includes BICC Communications in Westborough, Mass., and BICC Data Networks Ltd. in Hemel Hempstead, England, posted $75 million in sales in 1991. The company employs 245 people, with more than 90 in research and development. 3Com expects to retain all of BICC's staff.

Frame Technology raises $28 million in IPO

San Jose, Calif. — Frame Technology Inc. last week went public in a $28 million offering.

A registration statement filed with the Securities and Exchange Commision earlier this month called for an initial public stock offering of between $14.9 million and $17.5 million.

The San Jose, Calif., company's shares opened at $14 before jumping to $21.75 in its first trading session. The company said 1,219,234 shares will be newly issued common stock and 530,766 shares will be sold by current shareholders.

According to Frame, the proceeds will be used for working capital and general corporate purposes. Hambrecht & Quist Inc. of San Francisco and Wessels, Arnold & Henderson of Minneapolis are managing the deal.

Additionally, Frame announced a Windows version of FrameMaker, its page-layout program for long documents.

Former Mac execs move onward, upward

San Francisco — Three executives who once played prominent roles in the Mac industry have recently resurfaced at new companies.

- Larry Spelhaug, former vice president of marketing at Aldus Corp., has joined Pages Software Inc. as president and CEO. The San Diego-based desktop publishing start-up last week secured $3.5 million in venture capital.
- Charles M. Boesenberg, the ex-Apple marketing executive who took over as president of MIPS Computer Systems Inc. in Sunnyvale, Calif., was named president and chief operating officer of Central Point Software in Beaverton, Ore. Boesenberg will manage the utility software company's executive team and focus on developing new markets.
- Ed Esber, former chairman and CEO of the now-defunct Ashton-Tate Corp., has joined the board of Gold Disk Inc., a Los Angeles company specializing in presentation and productivity software. Esber also sits on the boards of Quantum Corp. of Milpitas, Calif., and Poqet Computer Corp. in Santa Clara, Calif.

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MacWEEK

Outbound turns new page with Mac Notebook System

Twin towers will to Mac line

One Scanner, wo printers

New standards to extend AppleTalk

MacWEEK

Just in time.

Alysis caching in on Quadra woes

By Raines Cohen

San Francisco — Disabling your Quadra's cache in one application doesn't need to slow down others. Alysis Software Corp. last week shipped Quadra Compatibility INIT 3.0, a new version of its cache-control system extension.

The $99.95 extension disables the 68040 processor's built-in cache only when code in an incompatible application is actually running, rather than whenever an incompatible application is open. When the program makes ROM calls or other applications are active, the extension reactivates the cache.

The new version also removes problems with AppleTalk and the Quadra 700 floppy drive that formerly appeared when the cache was toggled.

Unlike Impulse Technology's Animals (see story, Page 6), Alysis' extension does not switch to write-through caching. Alysis said that Microsoft Word 4.0, among other applications, remained incompatible when write-through caching was used.

Site licenses and quantity discounts are available. Users who purchased earlier versions can request a free upgrade.

Alysis Software Corp. is at 1231 31st Ave., San Francisco, Calif. 94122. Phone (415) 566-2263; fax (415) 566-9692. □

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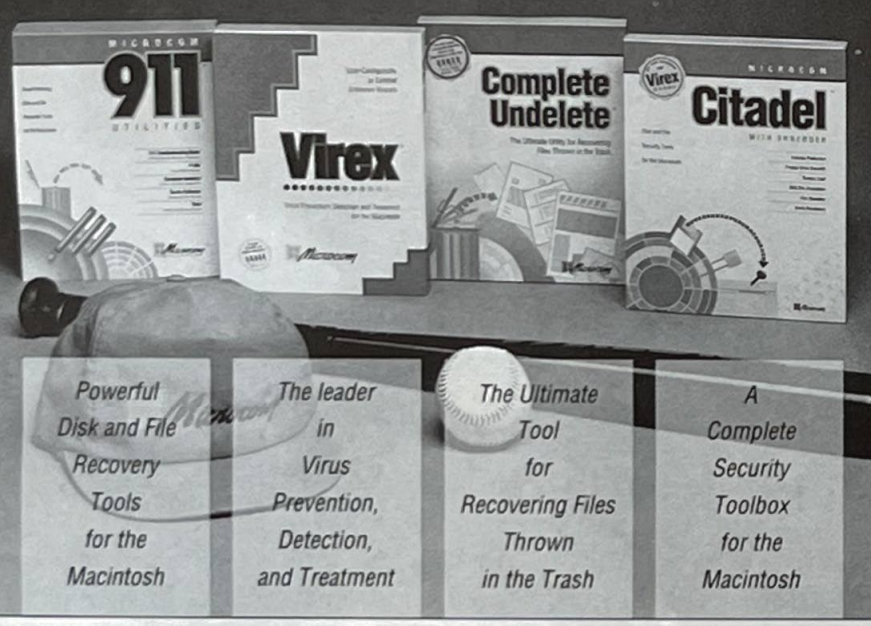

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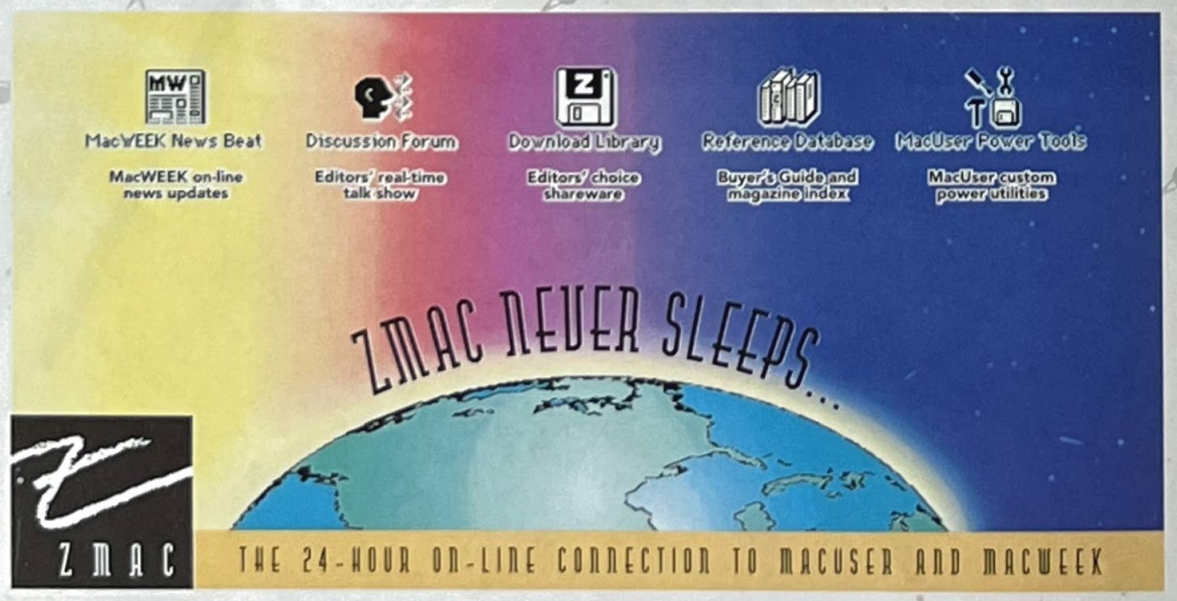


HOW TO USE ZMAC

If you're a CompuServe user, just type **GO ZMAC** at any **!** prompt.

If you don't subscribe to CIS, sign up with Zmac by following these directions.

First, call (800) 635-6225 (voice) to find your local access number.

Second, set up your modem and telecommunications software with the following standard Macintosh settings: 8 bits, one stop and no parity.

Dial your local access number. When connected, press **RETURN**.

You'll see the following prompts on-screen. Your responses are printed in **BOLD**.

Host Name: **CIS**

User ID: **177000,5200**

Password: **Z*MAC**

Agreement Number: **Z12D9014**

You will then be prompted for additional information including a credit card number for billing purposes. If you cannot bill to a credit card, call the CompuServe Customer support line listed below. **Sign-up is free**; however, normal access time is billed at $12.50/hour.

Call CIS again with your User ID and Password. A new password will arrive by mail within 10 days.

For more information call CompuServe Customer Support at (800) 848-8990.

Lawsuit

From Page 1

Christopher Escher said the sum is "not a formal damages claim" on Apple's part.

In fact, he said Apple's final claim "could be higher" as the suit nears a summer trial date.

"It's insupportable and speculative," said William Neukom, Microsoft vice president of law and corporate affairs. "We didn't copy Apple's software. We spent years of hard work developing Windows."

Neukom said the $4.37 billion figure appeared to be inflated by the inclusion of CPU-related sales for Windows and "unrealistic sales and profits loss" projections by Apple.

Hall, who works at Stanford's Hoover Institution, has been instructed by Apple not to comment on the suit, according to his secretary.

Legal experts doubt whether Apple could collect such a huge damage.

Copyright attorney G. Gervaise Davis III, a partner in the law firm of Davis & Schroeder in Monterey, Calif., contends it is "very unlikely" Apple would collect more than $1 billion if it wins the suit.

"The amount ($4.37 billion) is so astronomical that it could destroy any company — even Microsoft," Davis said. "I don't think any judge would do that."

The largest intellectual-property judgment came last year, Davis said, when Polaroid Corp. was awarded $873 million — half of the amount it sought — in its 14-year dispute with Eastman Kodak Co. over patent rights to instant photography.

Apple, Microsoft and Hewlett-Packard Co. were expected to file more than a dozen pre-trial motions last Friday afternoon in the 4-year-old lawsuit's latest skirmish. The motions involve expert testimony scheduled to conclude Feb. 28.

Each company has until March 6 to respond to motions, followed by a March 20 deadline to reply to responses.

A Microsoft spokeswoman said the Redmond, Wash., company is asking U.S. District Judge Vaughn Walker to issue summary judgments that would result in a decision without a trial.

However, Jack Brown, the attorney who is leading Apple's case, said Walker has told the computer maker "we're going to have a trial in June or July. I think the judge means business. We're finally going to get this thing going."

Jack Russo, a partner in the law firm of Russo & Hale in Palo Alto, Calif., said he expects Apple and Microsoft to supply Walker with "lots of video and written material [in their motions] to educate him on the Macintosh user interface and Windows."

"[Walker's] a hands-on type of guy," Russo said. "He's treating this as a precedent-setting case — all the way to the Supreme Court."

Apple sued Microsoft and HP in 1988, alleging they illegally copied critical portions of the Mac interface. The case was broadened last summer to include Windows 3.0 (see MacWEEK, June 25, 1991).

Although several prominent analysts have predicted an Apple lawsuit victory could block the sale of Windows 3.0, copyright lawyers said damage to Microsoft would be limited by a 1985 agreement in which Microsoft licensed some of the Macintosh's interface elements from Apple (see MacWEEK, Jan. 27).

"I think Apple will eventually force Microsoft into a costly settlement," Russo said. "[Apple] has been, and will continue to be, very aggressive." □

Shawn Tomlinson contributed to this report.

Multiple Master

From Page 1

that has largely been lost in the move to digital typography. In the days of metal type, a 9-point face wasn't exactly the same as an 18-point face scaled by 50 percent. Typically, in the smaller sizes the stems were thickened slightly, the x-height was increased, and the serifs were exaggerated to make small type more readable. In conventional PostScript fonts, a single outline is scaled to the desired size, so a 9-point font is exactly the same as 50-percent-scaled 18-point one. The optical scaling axis in Adobe's MM Minion restores the lost subtlety of metal type.

MM Myriad ships for $295 this week, and MM Minion will be released for $495 late next month.

Multiple instances. Each instance of a Multiple Master face is a FOND resource, rather than a new PostScript outline. Adobe will include with each Multiple Master font a suitcase file containing preset instances and an application called Font Creator that lets you create and preview new instances. When you create a new instance, Font Creator automatically adds the corresponding FOND resource to the font's suitcase. Each instance adds 15 to 20 Kbytes to the size of the suitcase file, so Font Creator also lets you remove instances to free up space. A new version of Adobe Type Reunion, included with each Multiple Master font, helps keep font-menu clutter under control.

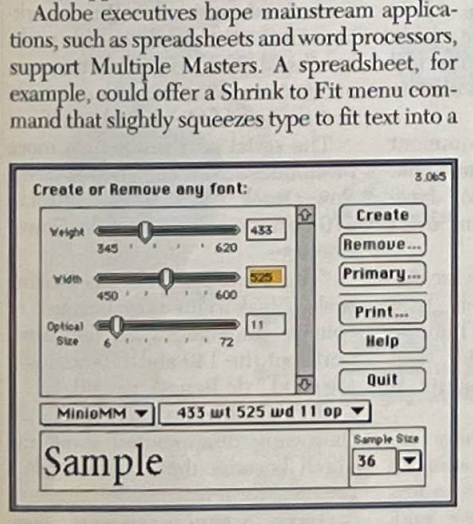
Font Creator is a transitional solution: Adobe is encouraging developers to include controls for creating instances from directly within applications. So far, only QuarkXPress 3.1 boasts this capability, but other applications will undoubtedly follow. Adobe Illustrator 3.2 doesn't let you create instances directly, but if you open a document containing instances that aren't in the current suitcase, it will automatically generate the missing instances.

One obvious use for Multiple Master fonts is copyfitting. Current page-layout applications let you track type — systematically removing space between characters — or use horizontal scaling to compress or extend the letterforms. But neither of these techniques is ideal for copyfitting. Tracking changes the "color" of the type, and readability often suffers as a result, while horizontal scaling distorts the shapes of the letterforms themselves, in particular the balance of horizontal and vertical strokes. With Multiple Master fonts, you can control the width of the type without distorting the letterforms or changing the overall color of the page. You also can use Multiple Master fonts to duplicate the line breaks and overall appearance of a missing font.

Adobe executives hope mainstream applications, such as spreadsheets and word processors, support Multiple Masters. A spreadsheet, for example, could offer a Shrink to Fit menu command that slightly squeezes type to fit text into a narrow column. Most developers, however, will wait to see how well the new fonts sell before they change their programs. Multiple Masters also will play a major role in Carousel, Adobe's upcoming document interchange technology. In Carousel, Multiple Masters will mimic other fonts so users can exchange documents without having the same fonts installed.

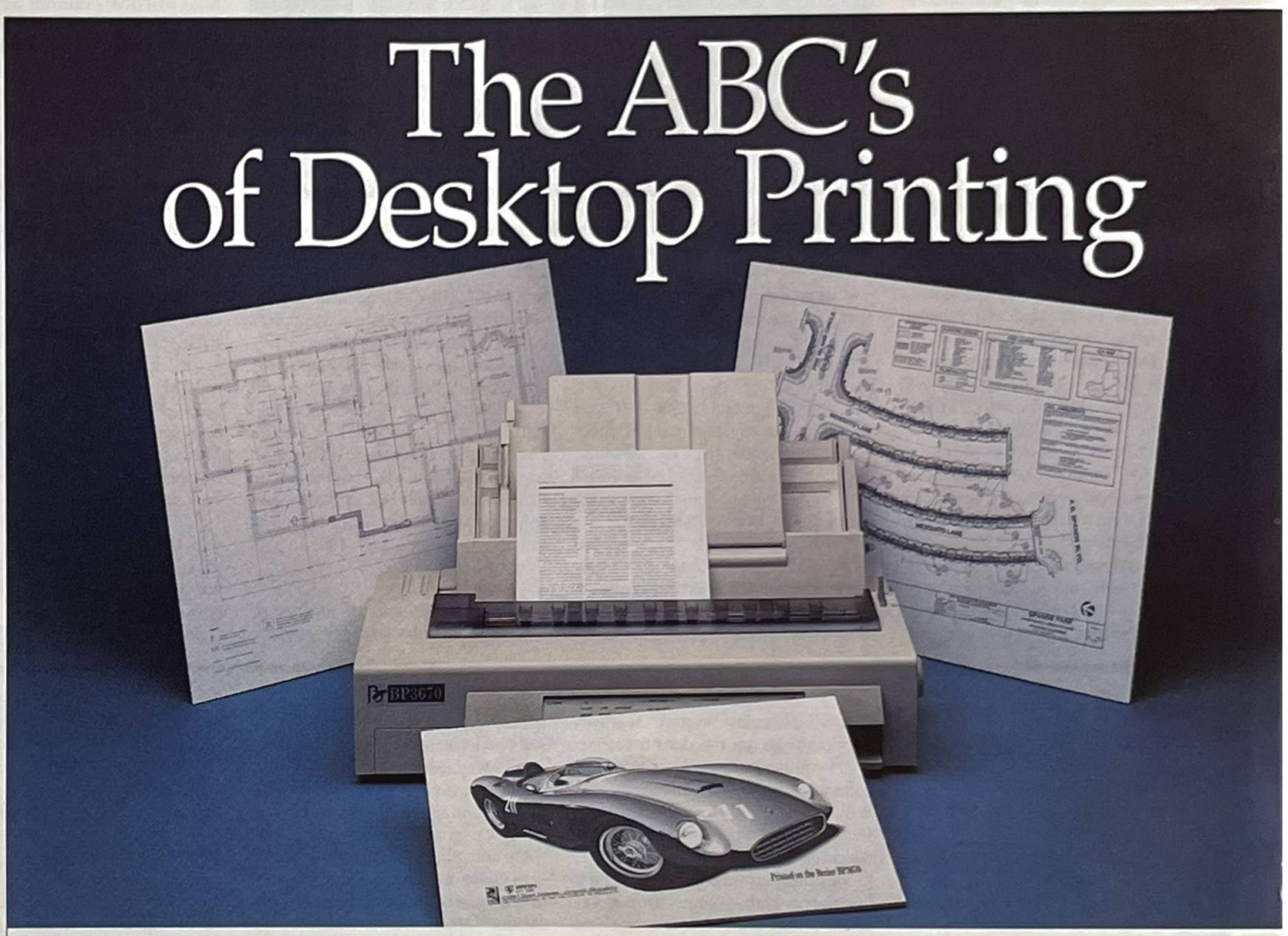
Type goulash. Designing Multiple Master fonts is much more difficult than designing conventional faces, from both a technical and an aesthetic point of view, so the market won't be flooded with Multiple Master faces in the near future. One constraint is that all the faces at the corners of the matrix must have the same number and type of anchor and direction points. But Altsys Corp.'s forthcoming Fontographer 3.5, in addition to putting the tools to create Multiple Master fonts in the hands of end users, will let you force two quite dissimilar fonts, such as Times and Helvetica, into the same matrix. This clearly isn't quite what Adobe had in mind, but inventors are often surprised by the uses to which their inventions are ultimately put. Multiple Masters won't make working with type any simpler, rather it will extend the range of typographic possibilities. The end result is likely to be much better and, at least temporarily, much worse typography than has hitherto been possible.

Adobe Systems Inc. is at 1585 Charleston Road, P.O. Box 7900, Mountain View, Calif. 94039. Phone (415) 961-4400 or (800) 344-3385; fax (415) 961-3769. □



Adobe's Font Creator lets users create and preview instances of a Multiple Master font by manipulating slider controls or typing in values for each axis.

The ABC's of Desktop Printing



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Seybold

From Page 1

and RasterOps Corp. will show display packages for manipulating full-color images on screen in real time.

▸ **Document interchange.** Adobe Systems Inc. will evangelize Carousel, its forthcoming technology for transferring documents across platforms and applications. Meanwhile, Interleaf Inc. reportedly will unveil another platform-independent document distribution plan, and Microsoft Corp. will announce a way to embed TrueType fonts into Windows documents to create portable files.

▸ **Fonts.** The battle of Type 1 and TrueType font formats is still in swing. Adobe will ship MM Myriad, its first Multiple Master font (see story, Page 1). Adobe has been touting this technology as an advance that sets Type 1 apart from TrueType, but Type Solutions Inc. reportedly will unveil an application that gives users Multiple Master-like control over TrueType fonts.

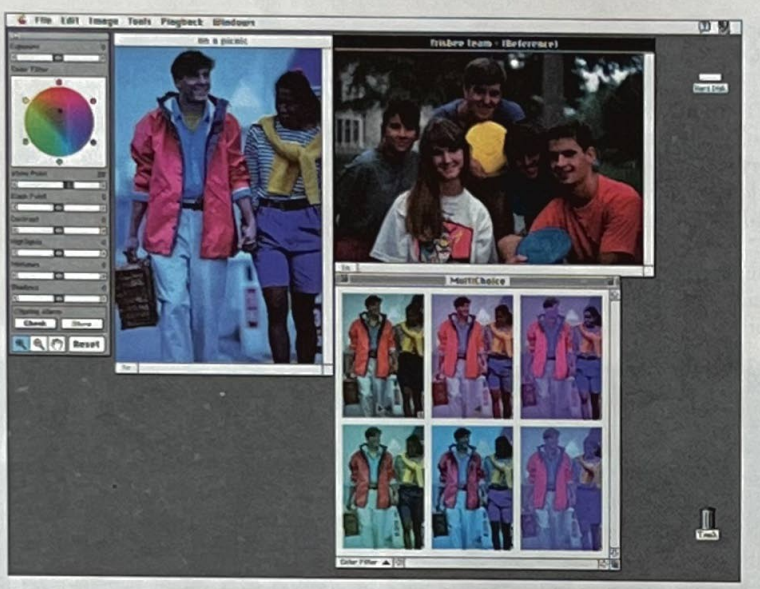
▸ **Publication management.** Quark Inc. and P•Ink America will team up to show their SQL-based schemes for handling work flow of QuarkXPress documents. Ideas to Print will show a new publication-management system based on ACIUS Inc.'s 4th Dimension relational database.

▸ **Hardware.** A trio of heavyweights will weigh in with new PostScript-compatible RIPs (raster image processors). Harlequin Inc. will demonstrate what it said is the first high-resolution Level 2-compatible RIP. Linotype-Hell Co. will offer lower-cost RIPs for its Linotronic 260 and 170 imagesetters, and Hyphen Inc. will demonstrate a Mac RIP that runs page composition and RIP functions independently. In addition, Pipeline Associates Inc. will unveil PowerPage/2, its new PostScript Level 2-compatible interpreter.

On the imagesetter front, Screen USA will demonstrate five new PostScript-compatible imagesetters, as well as the DTS-1015, a 2,500-dpi color drum scanner. Ultre Inc.'s 72E and 94E Ultresetters will feature speeds twice as fast as the company's current E line of imagesetters.

▸ **Graphics.** Alias Research Inc. will demonstrate its new version of Sketch, minus its hardware key and half the old price, and Ray Dream Inc. will show Version 2.0 of Designer. Quantel Inc. will demonstrate its Desktop Paintbox, a hardware-software system that lets Mac users manipulate huge TIFF files in real time (see story, Page 26). □

Matthew Rothenberg and April Streeter contributed to this report.



Consistent color will be a predominant theme at Seybold Seminars 92. Cachet from Electronics for Imaging aims to give users a simple way to correct color by matching original scans to a target image.

NetWorld

From Page 1

to take them seriously," one developer said.

Apple left it to IBM to send the strongest Macintosh message. The company touted its agreements with Apple in a section of its large booth.

"IBM is committed to supporting the Mac," a booth staffer told users while demonstrating a Mac-to-IBM example application. Using a Mac front end, the application allowed users to browse mainframe databases. "Get with your IBM folks if you want to connect your Macs," he said.

Users responded positively, welcoming anything that could help make the Mac-to-mainframe connection.

"I've been trying to piece together my Macs and an IBM-based database for a long time," said John Pennoyer, a LAN administrator at L.L. Bean Inc. of Freeport, Maine. "This really looks great," he said.

IBM said it will provide a 300-page programmer's guide free to corporate users who want to write Macintosh applications for peer-to-peer access to the company's various mainframes.

The company also said it plans to add the AppleTalk protocol stack to an upgrade to its LAN Server 2.0 software after it ships this spring.

Macintosh access to relational databases and mail-enabled applications also became easier at NetWorld. Announcements included:

▸ **Novell Corp.** of Provo, Utah, introduced NetWare SQL 3.0, which will allow Mac clients running Data Access Language (DAL) applications to send queries to SQL database servers (see MacWEEK, Feb. 10). Novell plans to ship the software next month.

▸ **CE Software Inc.** of West Des Moines, Iowa, showed its new Macintosh client for Novell's Message Handling Service (MHS) electronic-mail, which will allow Macs to live as an equal mail client on NetWare networks (see story, Page 18).

▸ **Lotus Development Corp.,** headquartered in Cambridge, Mass., showed the Notes workgroup application for the PC and said it will ship a Macintosh version by year-end, allowing users to collaborate across platforms (see story, Page 6).

▸ **Oracle Corp.** of Redwood Shores, Calif., gave the Mac a boost toward portable computing with its introduction of a Macintosh and PC-based link to Sharp Electronics Corp.'s Wizard palmtop computer (see story, Page 18). The company said that later this year it will ship PalmLink, an application programming interface that lets users query Oracle databases with the Macintosh and then download information to Sharp's palmtop. □

Retail

From Page 1

Oppenheimer said. In fact, Apple plans to include most new toolboxes, CPU support updates and Tune-Ups in a major revision to System 7 next year, he added.

"We never want to get to where you have a whole laundry list of things you need to get in order to run a piece of software," Oppenheimer said.

System accessories, such as AppleTalk Remote Access, most likely will not be included in major system revisions but will be sold through resellers.

▸ **Cafeteria OS.** The main reason it took Apple three years to ship System 7, Oppenheimer said, was that all the new system features needed to go out the door together.

"If you have a couple of hundred software developers with their arms linked all trying to march in a straight line, you're going to get nowhere fast," he said.

Shipping system upgrades as they become available means users don't have to wait for extensions such as QuickTime because OCE isn't finished, for instance.

"It only took 70 days from start to ship for us to do the System 7 Tune-Up," Oppenheimer said. Under the old method, he said, users might have had to wait much longer for that bug fix.

But getting new technology as fast as possible isn't the only reason to "break up" the OS.

Allowing users to choose what they want gives them greater control over their system size and performance.

"If we continued to roll everything into the OS, including accessories, eventually you might need 4 or 5 Mbytes of RAM to run an application," Oppenheimer said.

"There's no one customer," he added. Users who want to economize can, but users who want it all can get what they're looking for as separate extensions.

Apple also will develop more extension kits, such as the QuickTime one it plans to ship next quarter. These kits will include utilities, extensive documentation and demo programs.

▸ **Selling System 7.** System accessories (software extensions that add utility to the OS but aren't core technologies) will probably ship as retail products.

However, Apple is still undecided on what should be sold through retail channels, sources said. For instance, the OCE message server, which Apple considers an accessory, will likely be a retail product.

But sources said the debate still rages at Apple over whether to sell the OCE API, a store-and-forward transport layer that Apple considers a system toolbox. Normally, Apple would make toolboxes available free, but because the API also will act as a messaging client, it may be sold like an accessory.

Oppenheimer wouldn't comment on specific plans, but he said that whatever Apple does, it will have the goal of "reaching as many users as possible."

"The majority of our software distribution today has been user groups and electronic bulletin boards," Oppenheimer said. "But that doesn't reach the majority of our user base."

System 7, Apple's first foray into retailing the OS, has been adopted by 25 percent of Mac users in less than a year, Oppenheimer said. That is the fastest penetration of the installed base by an upgrade in Apple's history. □

Users greedy for speedy updates

Apple's plans for system software upgrades garnered mixed reviews from users.

Most users said they would welcome any Apple strategy that would shorten the wait between major upgrades to the operating system.

Some said they were even willing to make the extra effort to manage stand-alone extensions in exchange for getting them sooner.

"You're going to have to coordinate the whole effort, but I think it's a manageable problem and it's worth it to get at new software," said Ronald Bertram, database advisor for Rockwell International in Newport Beach, Calif. "So often you end up waiting for things for years when you could have had them immediately. I wish more companies would do this."

But other users noted that the staggered release of extensions will require Apple to supply better tools and information.

"As an in-house software developer, I rely on system calls to find out what's in the system my software is running on," said Doug Houseman, director of computer applications at Domino's Pizza Distribution Inc. in Ann Arbor, Mich. "But those don't tell me enough.

"Apple also has no means to communicate to me quickly enough what version of what is necessary for what," he added. Houseman also noted that the Installer requires a major rewrite to become useful for regular large-scale updates.

Users also said that network-management software, previously a convenience, will become a critical tool for tracking diverse networks.

Most buyers said budget planning is the only problem they foresee with commercial sale of system software. — *By Andrew Gore*

MIDI suites may turn sour on PowerBooks

By Dartanyan L. Brown

San Francisco — PowerBook users interested in making suite music have been sounding sour notes when it comes to dealing with Musical Instrument Digital Interface devices.

According to some developers and users, the PowerBook's serial ports exhibit peculiar behavior when reading incoming MIDI data.

"The serial port uses non-standard interrupts so it misreads System Exclusive data transfers. We're working closely with Apple on this problem," said Paul de Benedictis, communications director for Opcode Systems Inc. of Menlo Park, Calif.

The serial port problem is more pronounced on the 68000-based PowerBook 100 than the 140 and 170 because of its use of the Power Manager.

"The PowerBook 100 is looking really bleak right now because of voltage fluctuations at the serial port, but the 140 and 170 are looking good," de Benedictis said.

Both developers and users said they were disappointed about the glitch because the notebook Macs are ideal for musicians on the go.

Apple sound engineers have acknowledged that there is a problem but have not yet identified a solution. □

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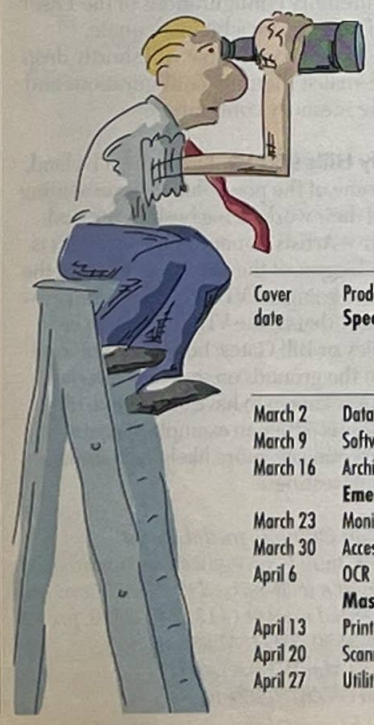

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Microsoft Works counterpunch

There's a lot to be said for attending the Winter Olympics in Albertville. For one thing, it's particularly nice this time of year in the French Alps. And for another, when it comes to raw excitement, you just can't beat a good luge.

But there's also a lot to be said for keeping an eye on the home front, which is exactly what the Knife did this time around. After all, excitement is where you find it, and in this case it was found in discovering some details on the third incarnation of what Microsoft considers the third best selling application for the Mac, Microsoft Works.

Sources who are familiar with the project, which is currently in the beta-test stage, tell the Knife that Microsoft plans to debut Works 3.0 sometime this spring. Based on these reports, the first thing users will notice is that the floating tool palettes are as easy on the eyes as the Word and Excel tool bars are ugly to behold.

This may or may not be a case of "last out best dressed," but the Knife is told the feature set is mostly what you would expect from a product that for the first time is facing a variety of credible competitors. One surprising element is the omission of publish and subscribe or any reference to Microsoft's own OLE technology in the beta.

Escape! If you've got an office full of the AppleCD SC Plus drives and you've been wondering if you should replace them with the new less-expensive model that Apple will soon introduce, don't be too anxious. The Knife has learned that, at least as far as Apple is concerned, the new drive is identical to the older unit it replaces both in performance and functionality. The only difference is the new model's lower price tag, and presumably, lower production costs for Apple.

The Knife also reports that the Apple Standard ADB keyboard is poised to follow the current CD SC Plus into the no-longer-available category. As soon as existing supplies are exhausted, Apple will replace it with the smaller, and again, presumably cheaper for Apple to manufacture, Apple Keyboard II, which first appeared on the Classic and LC. Keyboard connoisseurs will remember that among its many remarkable features, the Apple Keyboard II is the one with the Escape key inexplicably placed just to the right of the abbreviated space bar.

LC II again. The imminent announcement of the 68030-based Mac LC II has led to a fair amount of confusion, particularly among some members of the education community, where the LC is popular. The facts, according to the Knife, are as follows. First, Apple's Ethernet LC card is incompatible with the LC II, but a ROM upgrade is in the works that will solve the problem.

Then there's the matter of the IIe card. It will need a software upgrade to ensure compatibility with the LC II, and that upgrade is also in the tubes. Since the IIe card is, as they say, System 7-hostile, Apple is considering shipping one of the LC II configurations with System 6.0.8, which would make it the only new Mac to ship with System 6 since the advent of System 7.

Confession. It's often said that confession is good for the soul. While such spiritual matters are beyond the scope of the Knife's contract, he is betting that Apple will be better off with a public confession that the current standard memory configurations of the LaserWriter IIf and IIg are a bit inadequate. According to sources, Apple will shortly drop these minimalist memory configurations and double the memory configurations.

Beverly Hills 90210. Down in La La land, original home of the power lunch, representing artists and their works is big business indeed, and Creative Artists Agency in Beverly Hills is one of the biggest of the big. It's so big, that the comings and goings of VIPs rarely raise an eyebrow, unless, that is, the VIPs happen to be John Sculley or Bill Gates, both of whom were spotted on the grounds on separate visits last week. CAA is known to have only about 150 Macs, so this is either an example of acute micro-marketing or, more likely, something a lot more interesting. □

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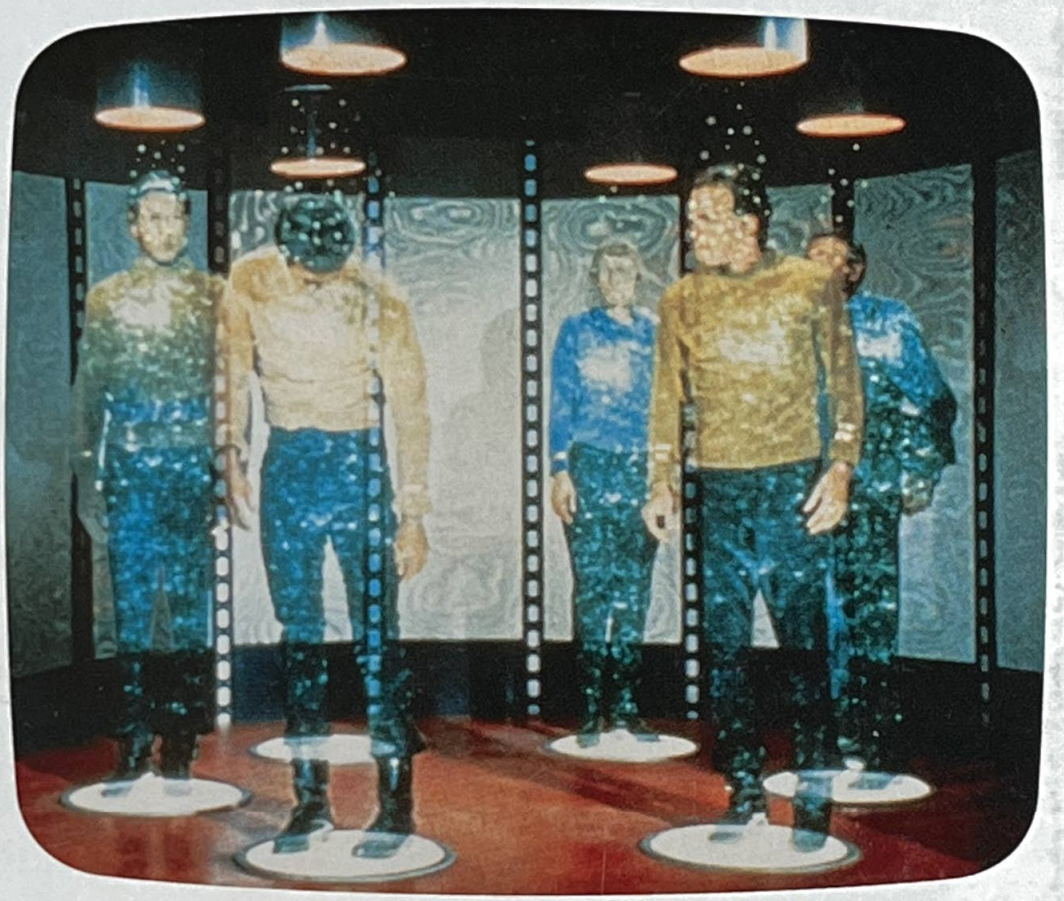

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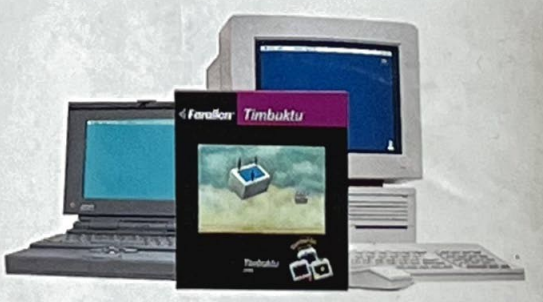

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